NEW BUFFALO CITY HOSPITAL
BUFFALO, N.Y.

The MODERN HOSPITAL

Vol. VII December, 1916 No. 6

Copyright, 1916, by THE MODERN HOSPITAL PUBLISHING COMPANY, Inc.
Entered at the Post Office at St. Louis, Mo., as second-class matter.
For subscription price and order blank see advertising page 24.

MULFORD

FOR THE CONSERVATION OF LIFE

LABORATORIES

The Specific Treatment of Lobar Pneumonia

Immune serum treatment in lobar pneumonia has passed the purely experimental stage.

Lobar pneumonia is caused chiefly by the pneumococcus, of which there are three different fixed types. Antipneumococcic Serum prepared by the Mulford Laboratories is obtained from horses which have been injected with the three fixed types of the pneumococcus.

Forty per cent of all cases of lobar pneumonia are caused by type 1, and lobar pneumonia caused by this type is the most amenable to serum treatment, while types 2 and 3 are less amenable to serum treatment. Antipneumococcic Serum Polyvalent Mulford is highly potent in its protective power against lobar pneumonia caused by pneumococcus type 1, and also contains antibodies to the other types—2 and 3.

Intravenous injection of 50 to 200 c.c. is advocated by prominent authorities to insure immediate action.

Antipneumococcic Serum Polyvalent Mulford is furnished in syringes of 20 c.c. each, and in ampuls of 50 c.c. for intravenous injection.

Further information sent on request.

Pneumo-Serobacterin Mulford is an efficient prophylactic agent against lobar pneumonia. Wright suggests doses of 1000 million pneumococci, followed by subsequent doses of 1000 million, for prophylactic purposes.

Pneumo-Serobacterin Mulford is supplied in packages of four graduated syringes, A, B, C, D strength, and in syringes of D strength separately.

Syringe A	250 million killed sensitized bacteria
Syringe B	500 million killed sensitized bacteria
Syringe C	1000 million killed sensitized bacteria
Syringe D	2000 million killed sensitized bacteria

H. K. MULFORD CO., Philadelphia, U. S. A.

Manufacturing and Biological Chemists

23424

THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VII *December, 1916* No. 6

FIRST UNITS OF THE NEW BUFFALO CITY HOSPITAL

Homogeneous Group That May Be Constructed Piecemeal Always Retaining Good Architectural and Administrative Form—Some of the Principles That Must Be Regarded by Architects

By MESSRS. GREEN & WICKS, Architects, Buffalo

IN designing a successful hospital, a knowledge of medical and surgical science and of practical operating conditions is required, combined with architectural and engineering ability. The patient's comfort also must be given great consideration by the architect, as rest, quiet, and mental peace contribute in a great measure to the benefits derived from proper medical care.

In operation the hospital is much like a factory —the patients, who are the new material, being received, inspected, recorded, and classified, are sent to the various departments for development to the final state, when they may be dismissed from the hospital.

The plan of the building must be such as to give the patients every advantage in the practice of surgery and medicine, and the comforts of proper sunlight, fresh air, quiet, and easy access to the various places in the hospital which they are to visit, such as the dining rooms, library, chapel, sun parlors, and surrounding grounds.

In order to accomplish satisfactory results, the layout must be such as to make the routine work of doctors, interns, and nurses as simple and easy of accomplishment as possible. All work should follow in easy sequence. The receiving, checking, and storage of food, the preparation of meals and their distribution to the patients, the method of caring for soiled linen and the refuse from the kitchens, all present problems which must be given consideration at the very outset.

Tunnels connecting hospital groups provide excellent means of communication between buildings, and are invaluable to economical and efficient operation where the distribution of supplies and the disposal of soiled or waste material are a constant necessity. They also serve as runways for heating, lighting, plumbing, and power lines, and as highways of distribution for all supplies. These tunnels may be made to form the basements of corridors or pipe spaces under the roadways and walks. The corridors being built over these tunnels connect all buildings of the group, and afford excellent means of communication between the various units; and, if of open construction—that is, with windows so that they may be at once thrown open or tightly closed as desired—they afford much additional space for the use of ambulatory patients.

The size of hospitals must vary greatly, depending on the diseases to be treated, the number and classes of patients accommodated, the restrictions of the site, the funds available for the construction of the buildings, the equipment, the maintenance, and many other considerations. Hospitals are often too large for the maintenance obtainable, or too much money is put into the construction when it should be retained for the care and upkeep.

In the case of a tuberculosis hospital the size should be determined by the prevalence of the disease and the population of the district which it is to accommodate. Vital statistics of the boards of health in various cities show fairly accurately the number of deaths in each year from tuberculosis, but cannot be relied on absolutely owing to the desire of some families to conceal the knowledge of the presence of the disease, and the willingness of

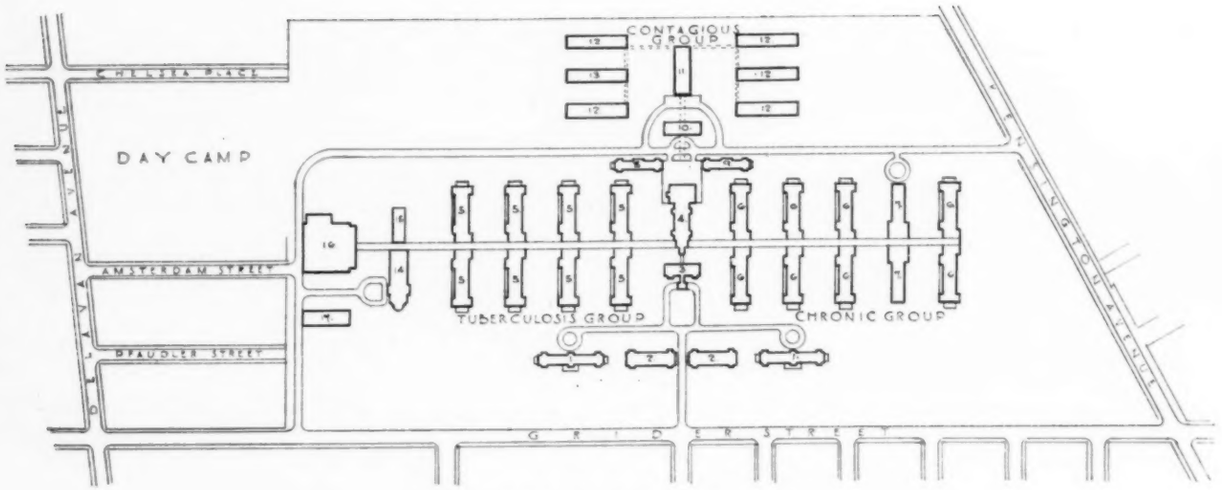


Fig. 1. Buffalo City Hospital. Plot plan.

1. Nurses' home.
2. Administration building.
3. Receiving building.
4. Service building.
5. Tuberculosis ward.
6. Medical and surgical ward.
7. Operating building.
8. Female help building.
9. Psychopathic building.

CONTAGIOUS GROUP.

10. Receiving building.
11. Service building.
12. Contagious ward.
13. Nurses' home.
14. Pathological building.
15. Linen and help building.
16. Boiler, engine, and laundry building.
17. Garage and shop.

some physicians to sometimes ascribe the death to other causes. For the same reasons, it is difficult to obtain registration of persons afflicted with the disease and, as they travel about from city to country, or to other cities, their record may not be taken until several months after arrival. In addition, the vital statistics in many cities are not very accurately or systematically kept. It is certain, therefore, that when the size of the hospital is determined from registered vital statistics, it will never be too large.

The arrangement of a tuberculosis hospital should generally consist of elastic groups formed of minor units of single buildings, so that an initial center, side, or end may be constructed at the outset, containing the essentials of administration, service, and patients' space. Thus the hospital plant may grow from time to time for greater service in a methodical and economical manner.

The orientation of the buildings, the convenience of arrangement for comfort, service, segregation, etc., have an important bearing on the design, and the structure should be simple, plain, economical, and as homelike as possible.

The ideal hospital will contain the foregoing suggestions and many other important ideas, and will be so arranged, constructed, and administered as to make each patient realize on leaving that his stay has been made as comfortable and pleasant as possible. An architect is, or should be, an "editor." He must gather and receive all facts and "publish" them in the resulting hospital.

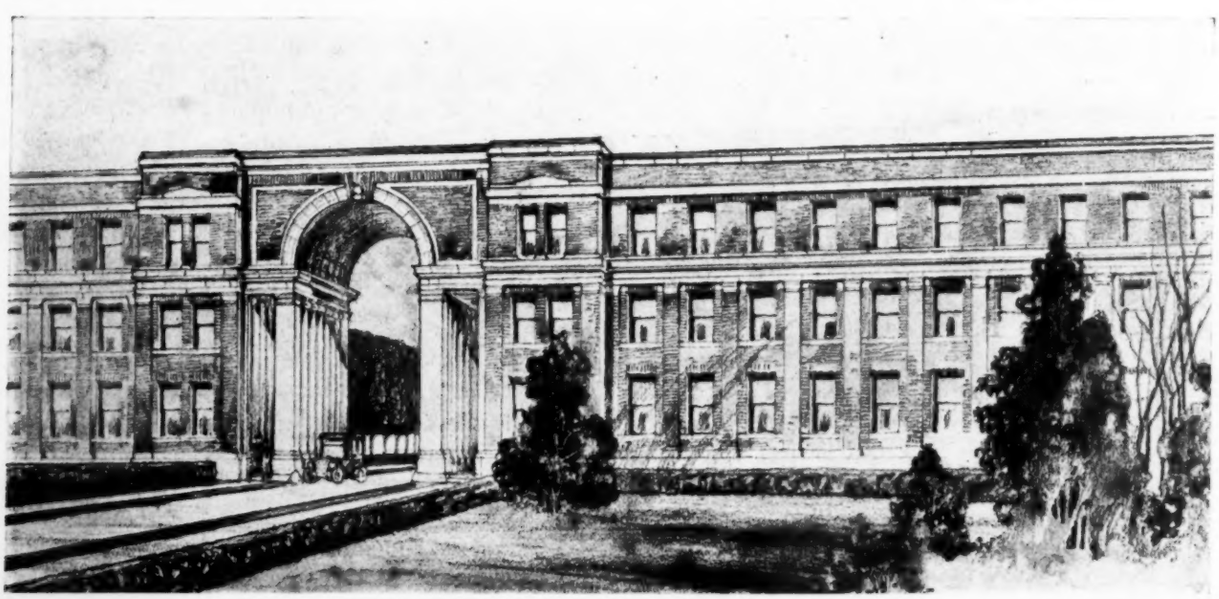


Fig. 2. Buffalo City Hospital. Administration building.

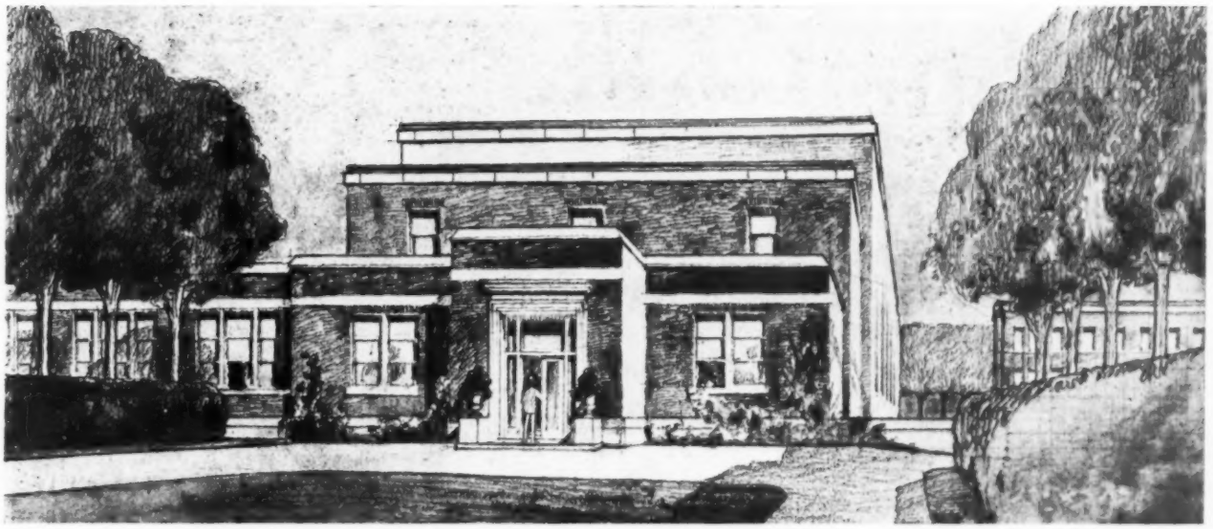


Fig. 3. Buffalo City Hospital. Receiving and service building.

In the new Buffalo City Hospital Dr. Edward J. Meyer and his commission have been gathering information for a long period, visiting other hospitals in America and foreign countries. The architects have been doing the same, and the knowledge so obtained, taken with practical considerations, has made the resultant arrangements.

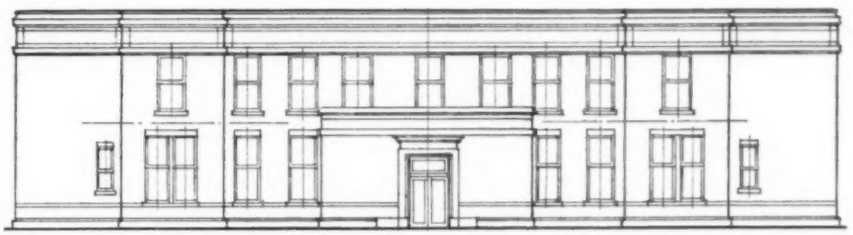


Fig. 4. Buffalo City Hospital. Receiving building. Front elevation.

The site known as the West Farm, consisting of eighty-two acres, is situated near the northern border of Buffalo in the highest section of the city. The long side of the property faces east toward Grider street, the main thoroughfare of that portion of the city. It consists of a beautiful upland, the old farm having for these many years remained in one tract. The property is bounded on the north by Kensington avenue, which is still undeveloped, on the east by Grider street, on the south by Delevan avenue, and on the west by open property. The site is approached from the city center by trolley cars through Grider street, and a railroad freight line may be conveniently utilized from the belt line surrounding the city. The city has bonded itself to the amount of $600,000 for the initial work of this undertaking, and it is expected that the fully completed hospital will cost about $3,000,000.

In planning the group of buildings for this hospital, there was laid out as a beginning an ideal unit hospital building. It will be observed by examining the plan that the ward and private patients' rooms occupy the sunny portion, and that the entrance halls, stair halls, and elevator spaces are placed in the northeast or northwest corners, and that all utility rooms are placed on the north side of the buildings. This unit plan forms the hospital buildings into

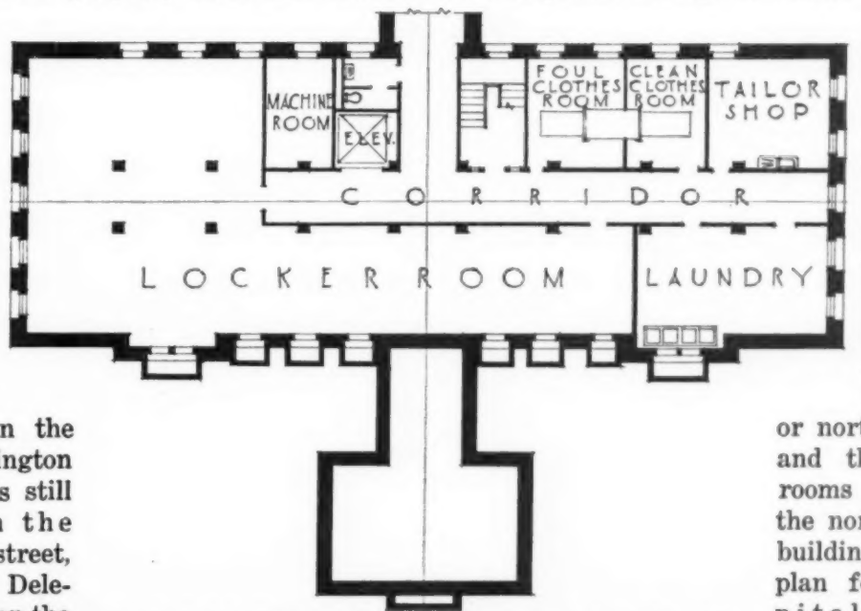


Fig. 5. Buffalo City Hospital. Receiving building. Basement floor plan.

pairs, arranged on the opposite sides of the main or central corridor. This plan will materially reduce the cost of construction over the usual method of court and double corridors, and the saving in distances of travel in operation will be very great.

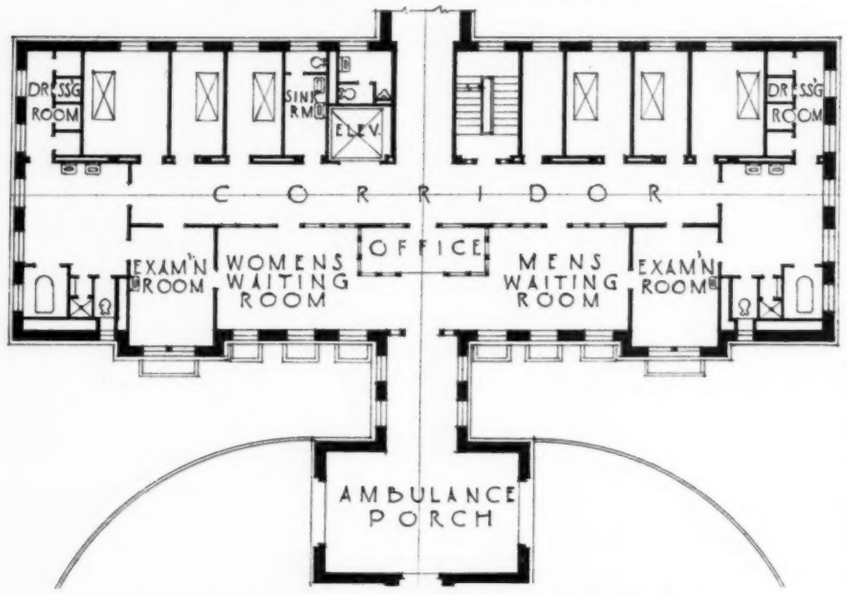


Fig. 6. Buffalo City Hospital. Receiving building. First floor plan.

The entrance to each ward unit is reached through the single main connecting corridor. The plan is the double ward plan, with a service corridor extending through the utility section, save that the only utility room opening on the main corridor is the stair and elevator hall. All other utility rooms are placed on the north side of the ward units, opening directly from the ward corridors. The main or central corridor, being 20 feet wide, may be used as a porch and sun rooms, or the windows may be fully opened and each pair of wards cut off from every other pair, thus giving complete isolation. Each side of the main corridor opens to courts between the ward units, which gives a greater sweep of fresh air than in the double corridor and court system. The plan is comprehensive, yet elastic, so that one or more units may be added from time to time without interference with units already built, and so that they will work in naturally with the conduct of the institution. The ultimate size of the hospital will provide for 2,000 patients.

The complete hospital plan provides for the treatment of advanced cases of tuberculosis as well as for all chronic and contagious diseases of the indigent poor. At present there is being built a portion of the tuberculosis division, consisting of twin hospitals, to accommodate 270 patients; a psychopathic building, to house 25 patients; a women's help building which is to be used at the outset as a nurses' home; and a service building, for the combined accommodation of the administration offices, staff's dining rooms, kitchens, laundry, store rooms, and boiler house. There is also provided in this building a temporary entertainment hall and rooms for recreation. Later, as the plan develops, the administration, boiler, and laundry departments will be placed in separate buildings.

The administration building is placed at the front and at the center of the hospital group, so that all patients, doctors, nurses, interns, etc., may be recorded on arrival, and so that the shortest distances possible may exist between it and the remote parts of the hospital.

The receiving building and detention ward are placed just at the west of the administration building. In this building all patients, after being admitted, are examined, diagnosed, classified, outfitted, and sent to the various divisions of the hospital. When they leave the hospital they are dismissed from this building. The receiving building has a large reception room arranged for men on one side and women on the other side. Adjoining this reception room are the examination rooms. If there is need of further diag-

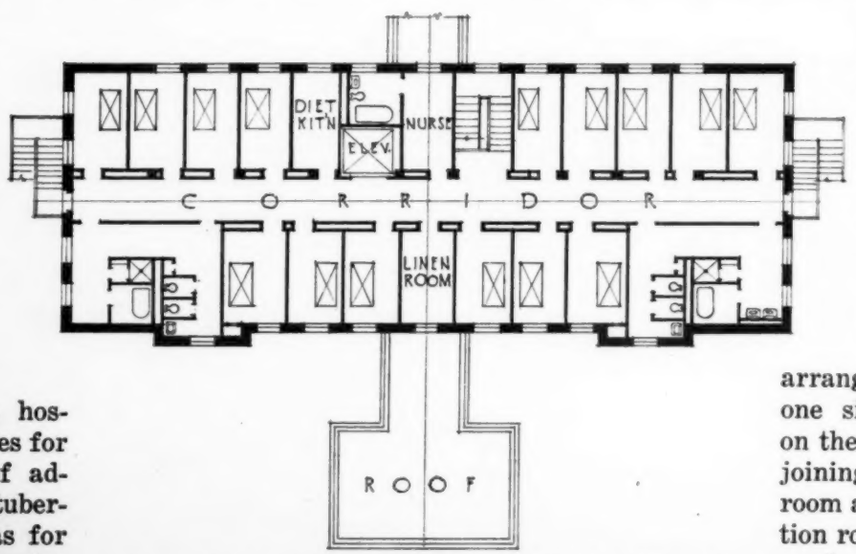


Fig. 7. Buffalo City Hospital. Receiving building. Second floor plan.

Fig. 8. Buffalo City Hospital. Service building. South elevation.

nosis or consultation as to any case, the patient is placed in the detention ward in the second story of this building to await further development, so that he may be sent to the proper division of the hospital or to other hospitals. Locker rooms, sterilizing rooms, and rest rooms are all at hand, giving the best facilities for handling each case.

The main corridor, extending north and south and running between all hospital buildings, is extended from the receiving building to the hospital buildings at the extreme north and south ends of the group.

The service building on the west side of the main corridor is placed on the east and west axis

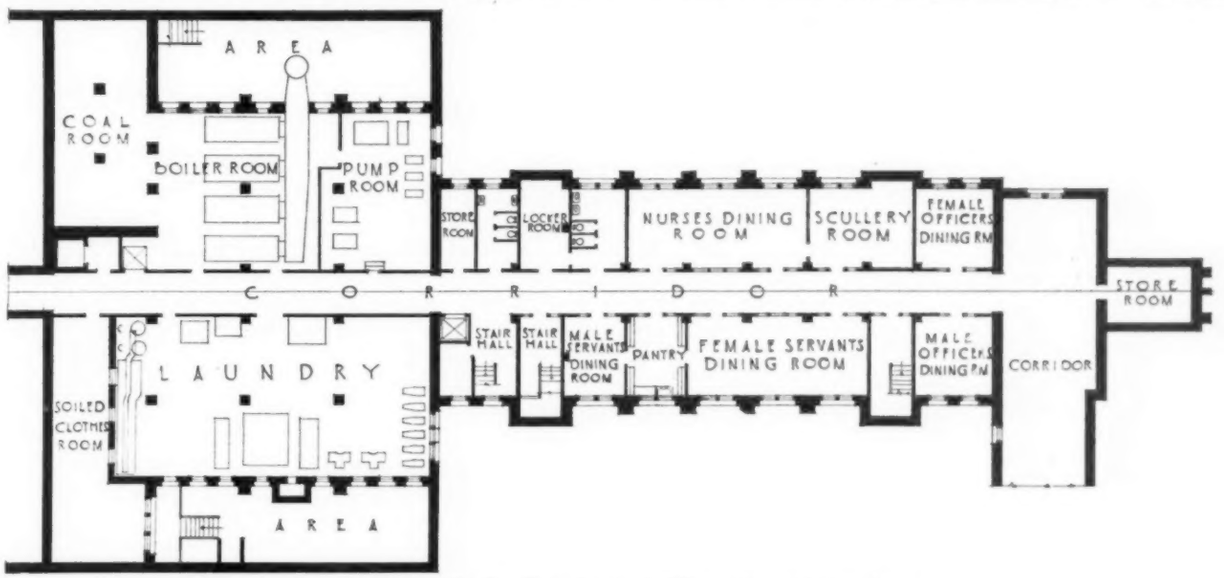


Fig. 9. Buffalo City Hospital. Service building. Basement floor plan.

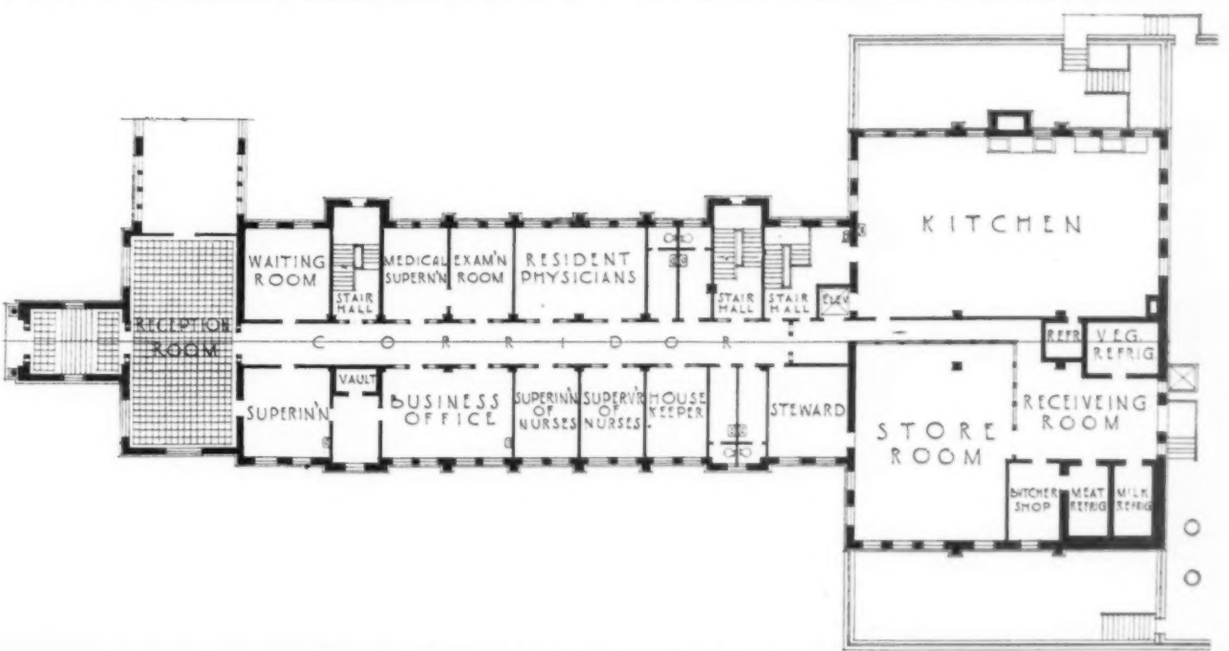


Fig. 10. Buffalo City Hospital. Service building. First floor plan.

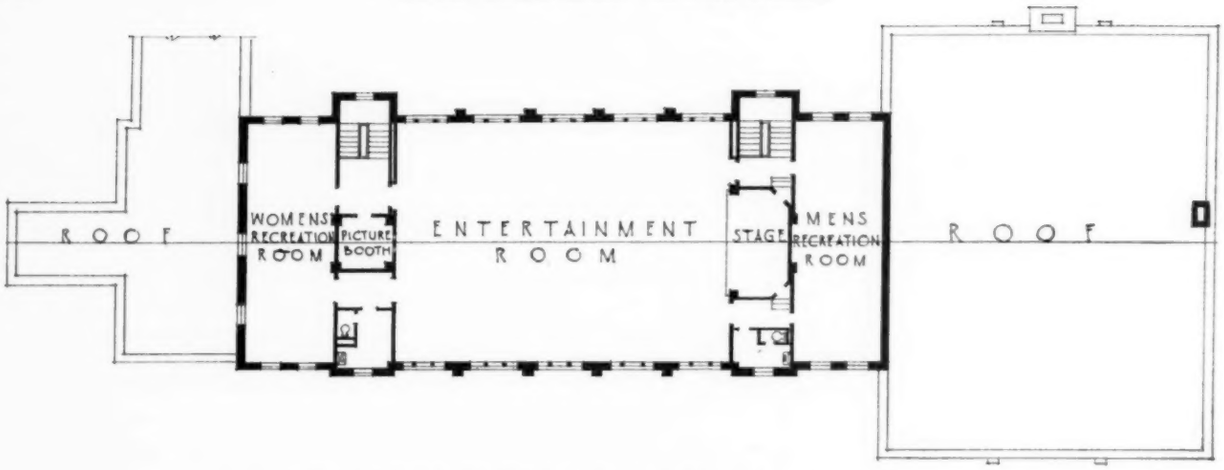


Fig. 11. Buffalo City Hospital. Service building. Second floor plan.

line, as are the administration and receiving buildings. Here are provided the necessary rooms for all supplies, the main and minor storage rooms, refrigerators, etc., the kitchens, pantries, and the dining rooms for all principals, nurses, help, etc.

The power plant, containing boilers, engines, coal storage, and laundry, is placed at the south of all buildings and on the center line of the central corridor, which forms the main axis of the entire group.

The nurses' home buildings are placed near the administration building, one on either side of the east and west axis line, the one at the south being for the nurses of the tuberculosis wards, and the one at the north for all others except those on contagious cases.

The ward buildings extending east and west from the central corridor are each three stories and basement in height. Each floor accommodates 45 patients, and each story has been planned as a separate hospital, so that the desirable classification of inmates is possible. The first story of each ward building is entered through a hall opening out of the main connecting corridor, and the second and third stories of these hospitals are reached from the hall of the first story by staircase or elevator. There is in the second story of each hospital an exit from the stair hall to the roof of the main corridor. Patients are cared for in 8-bed, 4-bed, or single-bed wards, having windows opening to the east, south, or west. The 8-bed wards have windows opening in two directions.

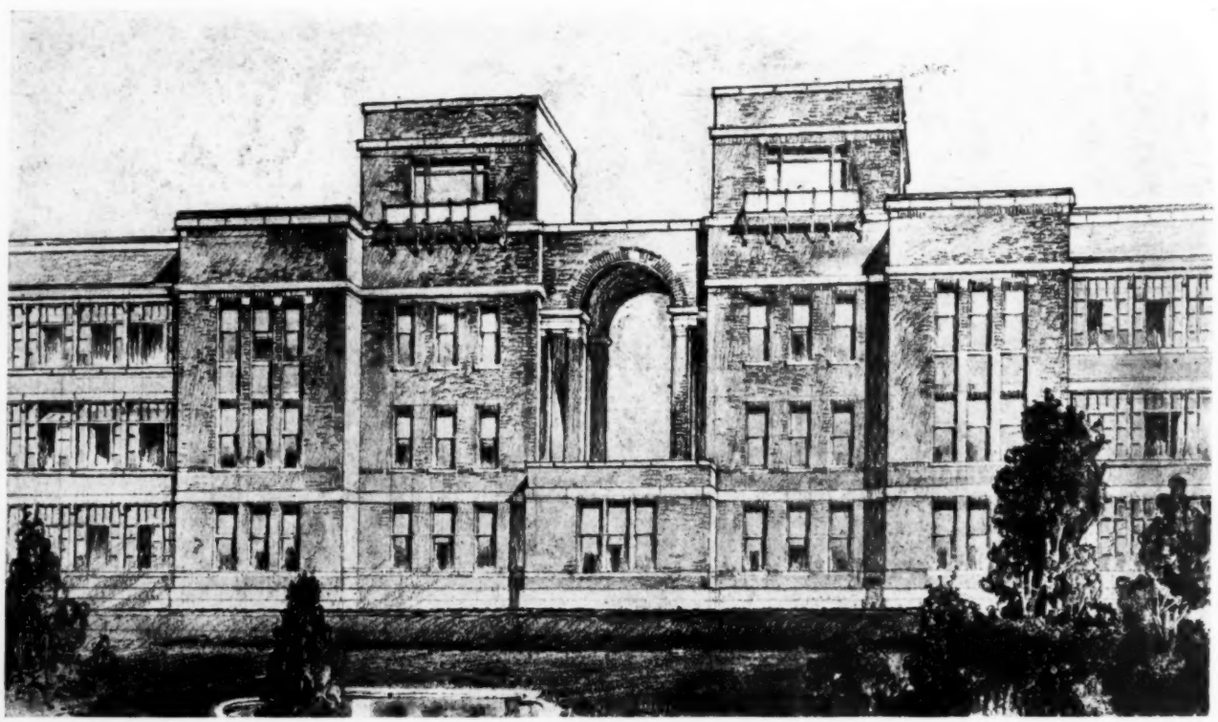


Fig. 12. Buffalo City Hospital. Tuberculosis ward.

Fig. 13. Buffalo City Hospital. Tuberculosis ward. Front elevation.

The arrangement of the private rooms is such that three of the single rooms may be used by patients seriously ill without disturbance to the patients in general.

Each of these divisional hospitals is supplied on each floor with a separate kitchen and dining room for the reason that in advanced tubercular cases many of the patients are confined to their beds. Food will be brought from the main kitchen in the service building by electric carts—not the ordinary box cart, which is so difficult to keep clean and is so cumbersome to operate—but a cart of an entirely new type invented by Dr. Goodale, of the department of health of the city of Buffalo, having racks upon which the food containers in the form of pails are suspended. Such a cart is easily cleaned, light to handle, and the containers, always hanging in a vertical position, are non-spilling in passing inclines. The pails on these carts are made of tinned copper, of established sizes to fit the warming rings in the diet kitchen steam tables, so that the food may be kept hot while serving. The food carts are raised by an electric lift from the basements to each floor in a perfected airtight shaft.

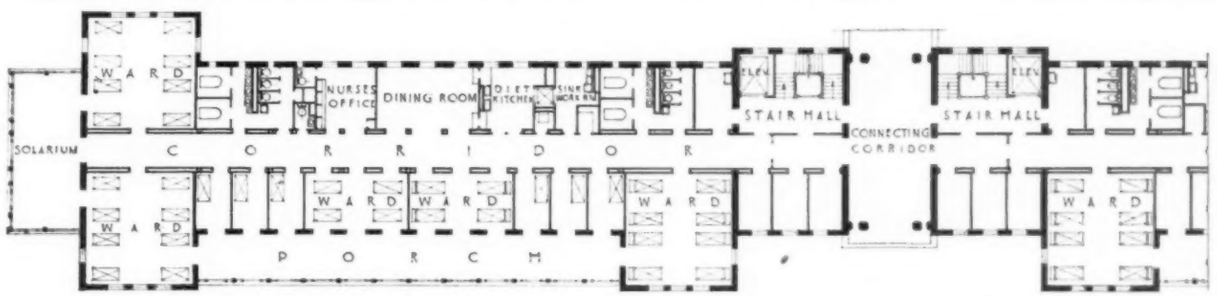


Fig. 14. Buffalo City Hospital. Tuberculosis ward. Second floor plan. The first floor plan is similar to the second floor.

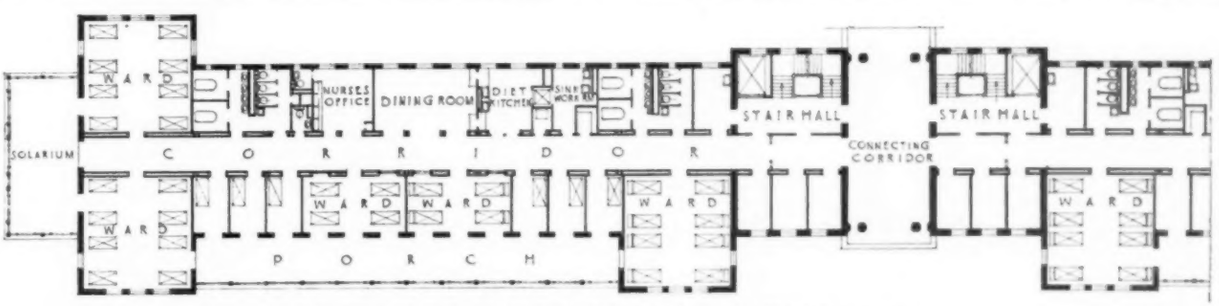


Fig. 15. Buffalo City Hospital. Tuberculosis ward. Third floor plan.

Windows have been provided between the cor-

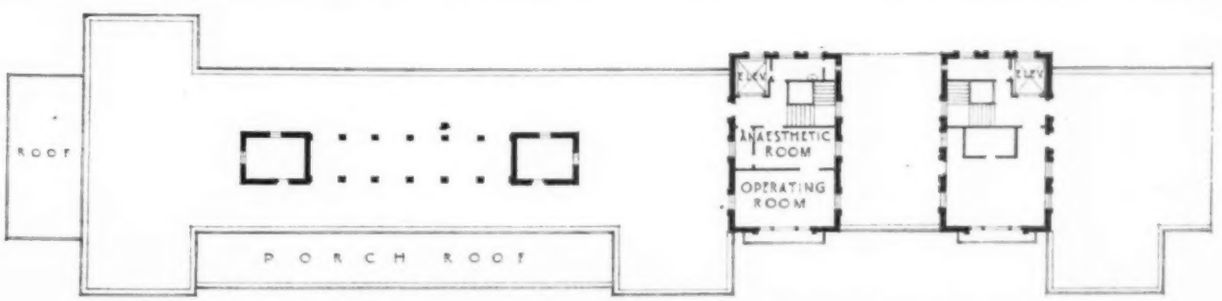


Fig. 16. Buffalo City Hospital. Tuberculosis ward. Roof and pent house plan.

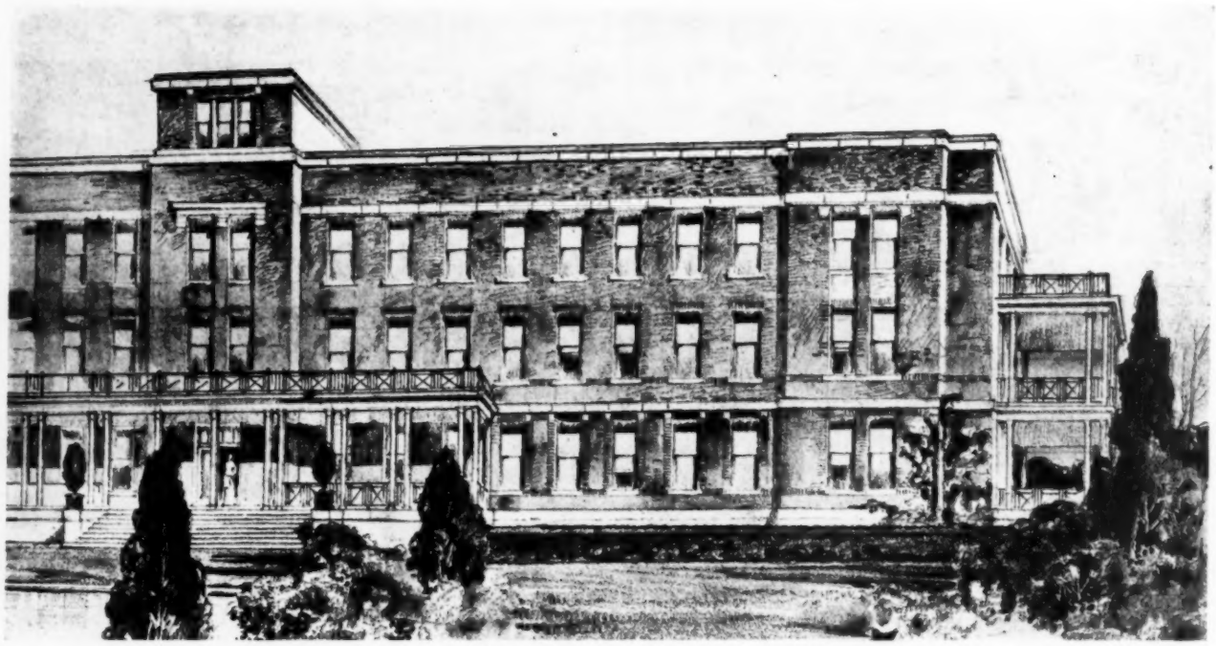


Fig. 17. Buffalo City Hospital. Nurses' home.

ridors and ward rooms, so that the patients may be observed from the corridors if desired. In each patient's room is supplied at the head of the bed a ventilated metal locker, where such clothes, etc., as are permitted are stored after having been sterilized. This arrangement is in lieu of the usual locker room, which is so inconvenient and causes trouble among the patients. General locker rooms, however, are supplied for articles which are infrequently used. Each patient will also be supplied with the usual bedside table and chair.

The windows throughout the ward buildings are divided into three equal-weighted sash of the sliding variety, thus making it possible to have the top, middle, or bottom sections opened, or, if desired, two-thirds of the window may be opened. Every ward and private room opens onto the main porch to the south or the solariums to the east and

Fig. 18. Buffalo City Hospital. Nurses' home. Front elevation.

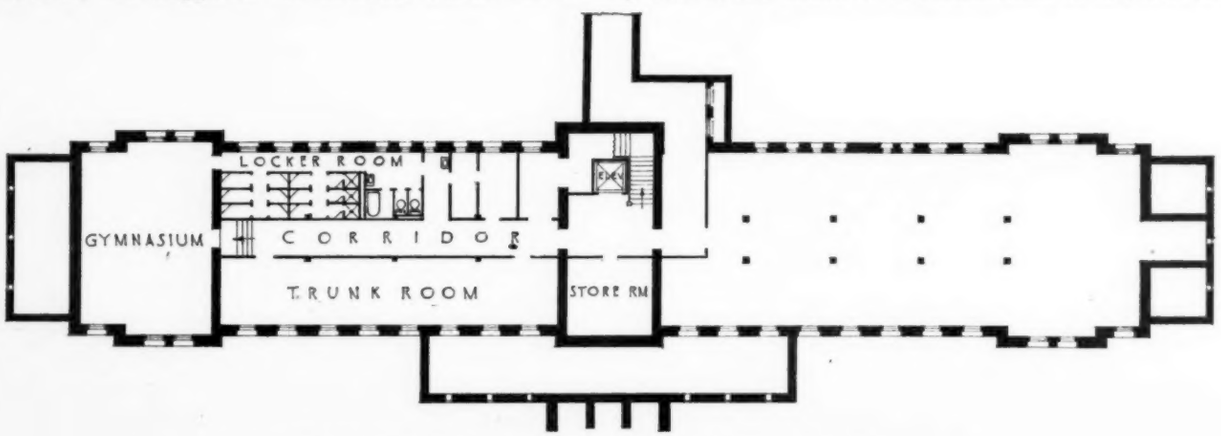


Fig. 19. Buffalo City Hospital. Nurses' home. Basement floor plan.

west, which are of such size that every bed in the hospital may be placed on them at one time if desired. The porches are to be inclosed, but in such a manner that they may be opened when desired. The dining rooms are open to the corridors, and all rooms, except the utility rooms, have transoms over the corridor doors. The utility rooms on the north side of the buildings occupy all the space save that used for dining rooms, treatment rooms, staircases, etc.

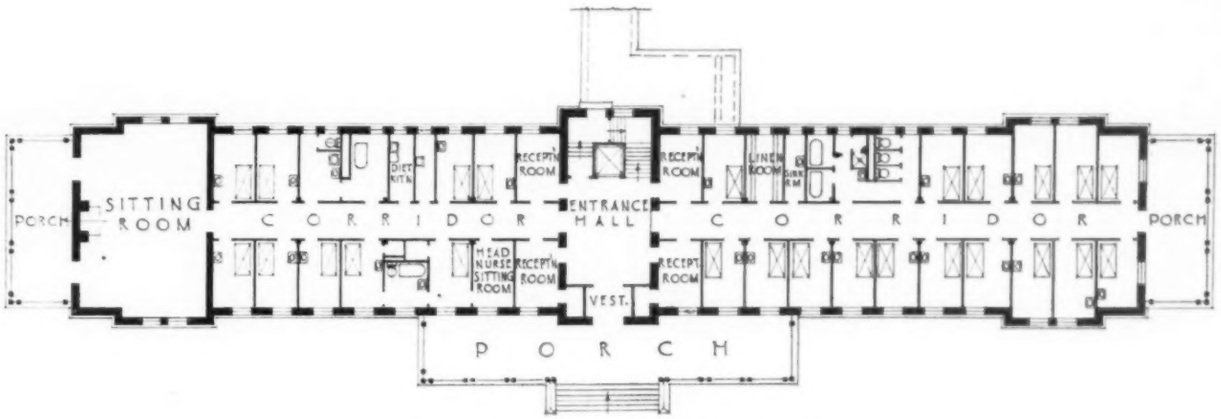


Fig. 20. Buffalo City Hospital. Nurses' home. First floor plan.

The diet kitchens on each floor adjoin the dining rooms. The food, after being dished up, is passed through a slide directly into the dining room. The soiled dishes are returned to the kitchen through a similar opening, and go directly to the scraping counter, wash sink, rinsing sink, and sterilizer in succession, after which they are placed upon the storage shelves in connection with steam tables. Adjoining each diet kitchen is an incinerator room, where all refuse is burned in powerful destructors. In the nurses' work rooms the soiled linen is bagged in carefully tied packages before sending to the laundry, and the bags as well as the linen are washed, sterilized, ironed, and repaired before returning to the linen storage, from which they are distributed to the various hospital floors. The mattresses and beds are taken to the basements by the elevators, through the service corridors to the sterilizing rooms, and then pass through the repair shop to the storage rooms, where they are held for distribution.

The first floor line of the buildings is placed 6 feet above the established grade, so that all basement rooms and corridors will be well lighted and ventilated. The rooms in the basement of the ward buildings at present under construction are used for a chapel, x-ray apparatus, morgue, barber shop, storage, etc.

The buildings are fireproof throughout, outside walls being faced with a light-gray brick. The floors are of reinforced concrete supported on steel beams. All partitions are of tile. There is no wood used except for the doors, sash, and window frames. All rooms and halls have a coved concrete or terrazzo base, flush with the plastered walls and with the finished floor material. The base joins the iron shoe at the bottom of the door frames, which extends through the jambs and meets the base on the opposite side. No doors or windows have any wood or metal trim, and all door frames are made of heavy-gauge steel, placed so that the jambs finish flush with the plastering. All corridor floors in the basements, in the stair halls of upper stories, and in the main kitchen and store rooms are laid with quarry tile. The floors of all other corridors, dining rooms, wards, and private rooms are of concrete, covered with battleship linoleum.

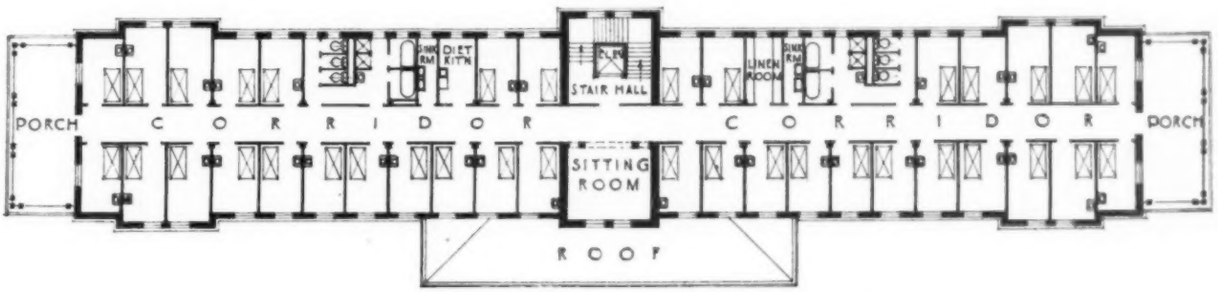


Fig. 21. Buffalo City Hospital. Nurses' home. Second floor plan.

On the fourth floor of one of the ward buildings now being erected is an operating suite, reached by the elevator and main stairs. Adjoining the operating room is the anesthetic room, wash-up rooms, etc.

The elevator and stair hall on the fourth floor open onto the roof, which will be fitted up for the use of patients as a promenade and open-air porch. Pergolas extend the length of the building to provide shade during the hot days and shelter from rain. There will also be erected along the parapet walls glass wind shields to shut off the chilling winds of early spring and late fall.

The roofs will be laid with quarry tile to give a smooth surface, so that patients who are confined to their beds can be wheeled out when conditions permit.

The buildings are heated by a pumped hot water system, direct radiation being placed in the rooms. All utility rooms have extraction flues extending to roof chambers, where suction fans are placed. The system of forcing tempered air through flues being considered cumbersome, expensive, noisy, and unsanitary in a hospital—for flues are apt to be filled with disease germs—the open-window system of ventilation has been adopted. The usual fan system works well in closed rooms, but, when windows are to be opened as much as they will be in a tuberculosis hospital, the system of direct radiation was considered to be more advantageous.

The board of managers of the hospital is composed as follows: Dr. Edward J. Meyer, president; Frank L. Bapst, vice-president; Thomas W. Jordan, secretary; Albert F. Laub, Michael F. Dirnberger, Jr.

The general contractor is George Baker Long, of Worcester, Mass.

FOUR YEARS OF THE WASHINGTON COUNTY (IOWA) HOSPITAL

The First Institution Created Under the Iowa County Hospital Law Has Served the Patients, the Public, and the Physicians—Could Not Now Do Without It

By C. A. BOICE, M. D., Washington, Iowa

THE first county hospital in Iowa erected and maintained by a direct vote of the electors (and that makes it the first hospital of that kind in the world), has just completed its first four years of service, and the time is opportune that we take stock and give the reasons for our existence, and see if, happily, we have done a good work and have proved our reason for being. Do county, or so-called community, hospitals have a place in the state life? Have the fruits been such that we can recommend other communities (of which the county is the unit) to follow our example, and build and maintain such institutions for the cure and alleviation of disease, to educate both doctors and laity to prevent as well as treat, to educate everyone to the higher needs of present-day life, and to make better doctors and a healthier and a happier people?

So far but one other county (Jefferson) has succeeded in following our example. Altogether some twenty Iowa counties have made the effort, but for apparently sufficient reasons only the counties of Washington and Jefferson (named for the leaders and founders of our national existence) have been permitted to blaze the way along this phase of communistic progress.

The method of conducting the campaign for our county hospital was the result of long and intimate study of local needs and conditions by the author. This method was followed quite closely by the committee in Jefferson county. The method was outlined in detail in a paper I published in THE MODERN HOSPITAL, April, 1915, and has been made the basis of special articles in *The World's Work*, July, 1915; *Good Housekeeping*, and *The Country Gentleman*, July, 1916. The law which authorizes such hospitals provides that a petition signed by at least 200 freeholders be filed with the board of supervisors in time so that the board may publish the required legal notice full ninety days in advance of the time of election. The question may be voted on at any regular election or at a called special election. The petition and notice must specify the millage tax per year, and the same may not run to exceed twenty years. The hospital is governed by a board of seven trustees, who are first appointed by the board of supervisors and thereafter elected as are other officers. They serve without salary.

The important points in the campaign are: (1) have the movement fathered by some county-wide organization, the medical society in lieu of any other—certainly every physician should sign the preliminary petition; (2) the campaign should be conducted by a small committee with large powers (my idea of the size of the committee is three, of whom two are "dead"—then it is no trouble to get committee meetings and initiate proceedings); (3) no active work to excite criticism should be done until the last week or ten days

preceding the election, and then it should be a whirlwind affair, and every possible wire should be pulled to make votes.

The Washington County Hospital was opened for work on July 16, 1912. It is a fireproof, three-story, 40x80 building, has nineteen private rooms and two wards. The capacity is 35 or 40 patients. The total cost at time of opening was $41,000, of which $9,200 was contributed—$3,700 for land and $5,500 for furnishings. Every cent of the county money—1 mill tax for four years, $32,000—went into the building proper.

From July 16, 1912, to July 31, 1916, 1,000 persons have been cared for in the hospital. Of these, 460 have undergone major surgical procedures, 163 have been medical cases (exclusive of 62 babies after birth), 171 have had tonsillectomies and adenoidectomies (when indicated). There have been 67 confinement cases.

The benefits or value of the hospital can well be examined under these three headings:

1. Value to the patients.
2. Value to the general public or community.
3. Value to the physicians.

1. Has the hospital been worth while to these 1,000 people? Has it rendered a service which they could not have had at home, or could they have been transported to some larger city for efficient care? In the campaign we told people that the hospital would give care to many who would not or could not go away from home. Someone has said that hospitals in the smaller cities and towns deserve to rank, alongside the discovery of anesthetics, as among the most important advancements of medicine and surgery of the past century. No philanthropy nor charity appeals so strongly to our nature as placing within easy reach the means of relieving the sick and wounded sufferers in every community.

One of our large taxpayers worked for the hospital, saying that he did not believe in this Montgomery-Ward-Sears-Roebuck method of caring for sick people by shipping them away from home, but that we should be prepared to care for them in our own community.

Considering the major surgical work of 460 cases, a considerable number of them could have been transported safely reasonable distances, but they have remained near home and friends, have been cared for by known and interested nurses and their own family physician—conditions which are frequently of inestimable value to insure rapid convalescence.

The emergency cases, of which there have been a considerable number, could not have been transported safely long distances. The outcome of these cases has been exceptionally good because attention has been given in such a short time. Many have been operated on within two hours of the onset of the emergency. These cases have included appendicitis in its severe forms, gangrenous gall-bladders, cesarean section, strangulated hernias, intestinal and ureteral obstructions, fractures, etc. We recall quite vividly three men in particular who actively opposed the hospital. Two of them were later brought in with gangrenous appendices and the other with a gangrenous gall-bladder. Early operation saved all three. Is it necessary to say that these three men are not now "knocking" the hospital.

Of the medical cases, practically none would have received hospital care. They have here received care which in the home would have more than doubled the cost, and they have been free from the home worries and neighborhood nursing and gossip. This quiet and rest has a distinct value in treatment. Our medical work has not been large—163 out of 1,000 (not including 62 babies). We have no typhoid, and, of course, communicable diseases have not been admitted. Not a single typhoid case has originated in Washington county in over four years, and less than ten imported cases have been reported in that time.

Of the minor surgery, tonsillectomies, hemorrhoids, perineorraphies, etc., the greater number would not have been cared for. The presence of the hospital and the ability of some of us to do the work has encouraged the procedure, and the end results of these cases have been most gratifying.

Of the obstetrical cases, 67 in number, none would have had hospital care. These cases have received, all will admit, far better care than is possible in any home. In addition, they have received invaluable instructions in the care and feeding of the babies, and of the puerperium. Many complications of labor have been satisfactorily handled—breeches, placenta previa, cesarean section, etc.

As we have not as yet accepted the principle that it is the duty of the rich to care for the poor, the duty rests with the state or community. It is an accepted fact that a person who is actually ill with any serious illness requiring medical or surgical attention stands a much better chance of recovery if he receives treatment in a hospital. It is generally conceded that the well-equipped general hospital renders the best service. There can be no question that the benefits which have accrued to these 1,000 persons have been of considerable moment.

There have been 44 deaths in the hospital, of which 5 were still births, 18 were moribund on admission, 9 were known to be incurable, and in

12 there was some opportunity to save life or a surgical accident supervened. The death rate thus is 1¼ percent.

2. Does the hospital benefit the community? There can be no question that any well-equipped and well-conducted hospital is a distinct addition to the community life. It teaches people that there are improvements on the old established order of home and neighborhood nursing; it teaches them to expect and also to demand better care in diagnosis and treatment. The hospital should be and can be a center from which radiate influences for the betterment of community life, school hygiene, better babies and better food supply, the prophylaxis of infectious diseases, the prevention and treatment of tuberculosis. The law provides that a separate building may be erected for the care of the tuberculous, and another law provides that all Iowa counties shall provide for all indigent tuberculous. Our hospital has taught the community that good, satisfactory work—medical and surgical, with its essential after-care—can be done in the small community institution.

A large building, with its so-called "famous" attendant, is not the only essential requisite for good work, and by good work I mean curing the patient safely, quickly, and surely. It has taught people what good nursing is—that competent nursing is often half the battle. It has demonstrated that infections, post-operative and accidental, are not nearly so common nor virulent in small well-conducted institutions as they are in larger hospitals, with their greater number of infective cases. Our stitch abscesses and other post-operative infections have been practically nonexistent.

In my own work for the past year I have been using the McDonald solution exclusively. It is a mixture of acetone, 40 parts; denatured alcohol, 60 parts; and pyxol, 2 parts. I have found it entirely satisfactory, positively antiseptic, nonirritant, and economical. The late Dr. J. B. Murphy, in the 1916 issue, volume II, of "Practical Medicine," just off the press, says that this solution is superseding iodine.

In a previous communication before this society I mentioned our use of the continuous sponge. This has been a valuable educative feature in that it has demonstrated that we exercise every care and have made surgery somewhat safer.

3. The effect on physicians. County hospitals are open—that is, all reputable physicians of the county have equal rights. No physician is allowed on the board of trustees. The superintendent (a trained nurse) has complete authority within the building. If she thinks a physician is incompetent, she may deny him the privileges of the hospital. Some may question this statement—some have questioned it; but if a physician is declared incompetent by the superintendent—and she backed by the board—I am sure such a physician so branded would have small chance of getting a mandamus from the court.

Has our hospital benefited the local physicians? Not the least of the byproducts of the hospital is its influence on the standards of local medical practice. Raising the standard of professional honor and practice is most important to any community. It has shown all what good surgery and good surgical conditions and surroundings mean; it has taught the value and importance of early diagnosis. Without the idea of criticism, I may say that it has taught some that cold water bottles, castor oil, and calomel are not good treatment for acute abdominal conditions; it has shown the value and the place of scientific nursing; it has taught the need of frequent consultations and conferences. It has demonstrated the value of complete tonsillectomy. Of the 171 such operations, not a single one has been followed by undue hemorrhage or mastoid involvement or any other complications.

Unfortunately, not all the doctors in the county use the hospital. For reasons unnecessary to mention here, some prefer to send their patients to other hospitals. Of those who do use the hospital, all freely admit its educative value, and say they are better doctors than they were four years ago. The hospital has amply demonstrated its power to educate, not only the patients, the public, the nurses, but the physician. The constant more or less close observation of each other's work has stimulated each one to do his best. The latent ability in each one has been developed, and I may safely say that each one has been benefited in proportion to what he has given. If he has been interested in his work, has recognized the hospital as an aid to better work, has examined himself carefully for faults and endeavored to correct them, that physician has grown immeasurably, and is a much better and a safer doctor than he formerly was. On the other hand, if he has looked at the hospital as merely a boarding-house for sick people (and we have such doctors in every community), he is very little better than formerly. One doctor, on being asked to teach in the training school, asked to be excused, as he didn't want to study any. I know of nothing to improve such cases of mental dry-rot except the services of the undertaker.

We see here demonstrated the biblical truth, "As man soweth so shall he reap." If he sows sparingly, he shall also reap sparingly; if he sows bountifully, he shall also reap bountifully.

Realizing the value of trained anesthetizers, we have encouraged one or two men to specially prepare for the work, and they give most of the anesthetics. Ether is used exclusively. We have not aspired to anesthetic fads and fancies, and have never in our limited experience had any serious complications.

The cost of operation is important. The hospital does not pay its way, and we never expect or desire it to do so. Being county property, it owes the community a duty, and we care for a considerable number who pay little or nothing. The deficit is made up by the county, but the deficit is not as large as it seems. There are in every community a certain number of persons who must be cared for at public expense, and the county is merely caring for these people in the hospital instead of in the homes, and at a less expense; so we figure that the county is really making money by having the hospital.

The universal expression now is, "How did we get along without the hospital?"

ARMY AND NAVY GENERAL HOSPITAL AT HOT SPRINGS, ARK.

An Institution, Built Up Over a Period of Many Years, for Sick Soldiers and Sailors—Is of Good Architecture—Equipped With Most Modern Appliances—The Waters and Their Uses

By OUR SPECIAL CORRESPONDENT, Washington, D. C.

THE Army and Navy General Hospital, Hot Springs, Arkansas, was established in order to give the sick of the army and navy the benefit of the treatment obtained at the springs. The hospital occupies a portion of the government reservation. The lands embracing these wonderful healing springs were set apart as a reservation for the future disposal of the United States as early as 1832 (Act of Congress, approved April 20, 1832), although no active assumption of supervision was exercised until 1878. Under Government supervision the springs have been made a national health resort. There are about twenty-five individuals and corporations holding leases for hot water from the Government reservation, and in addition free baths are maintained for use of the indigent, the expense of which is defrayed from the rentals received. (Act of Congress, approved December 16, 1878.)

The construction of the buildings for the Army and Navy General Hospital was started in 1883, after plans prepared by J. L. Smithmeyer & Co., who were also the architects for the beautiful Congressional Library, which adorns the nation's capitol at Washington, D. C.

The first structures that were erected consisted of an administration building and two ward wings, and from time to time new buildings have been added to the group, consisting of bath house, power, heating and lighting plant, officers' quarters, reservoirs, store houses' female nurses' quarters, new hydrotherapeutic baths, etc.

Under the direction of the present commanding officer, Col. F. A. Winter, Medical Corps, United States Army, the following additions and buildings have been built or are in course of construction: barrack for the hospital corps detachment; sergeants' quarters; garage; store house; additions to ward buildings; new operating suite; and general improvements and repairs to all the buildings.

Cases treated at this hospital are: rheumatism in its various forms and with its many complications, and nervous diseases and diseases of the digestive and respiratory systems. The special feature in the treatment of diseases at this hospital is the bath, which is administered in the various forms of tub, plunge, douche, vapor, electric, etc.

The supply of hot mineral water is obtained from a spring at the lower part of the west side of Hot Springs Mountain, and about 60 feet below the bath house. It flows at a temperature of 140 degrees Fahrenheit, and is one of the celebrated hot springs of the place, of which there are along the mountain side about 44, all within an area of 1200 feet in length by 300 feet in breadth. Its composition is given in an analysis by Professor David Dale Owen and Professor E. H. Larkin, as follows:

	Grains per gallon
Magnesium carbonate	0.13
Calcium carbonate	3.97
Sodium sulphate	0.38
Potassium sulphate	0.23
Calcium sulphate	0.11
Sodium chloride	0.01
Calcium silicate	0.46
Iodine and bromine, of each	a trace
Iron sesquioxide	0.10
Alumina	0.45
Silica	1.87
Organic matter	0.70
	8.41

It also contains free carbonic acid. The springs may be classed as indifferent thermals, resembling in composition those of Schlangenbad, Töplits, Gastein, Wildbad, Chaudefontaine and Pfeffers, and also, but not so closely, Bath, in England, and

Baden Baden, in Germany, the latter containing a greater proportion of mineral.

The spring which supplies the hospital has an estimated flow of 30,000 gallons in twenty-four hours. The water is forced by a steam pump into reservoirs at a height of 150 feet, where it is allowed to cool before being used, and distributed to the bath house and hospital buildings.

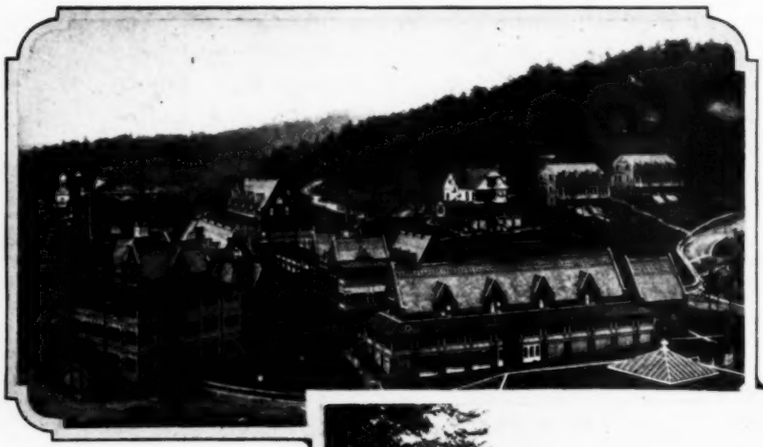


Fig. 1.

Dr. Bertram B. Boltwood, of New Haven, Conn., under authority of the secretary of the interior to examine the waters of Hot Springs, reported that the waters of the springs on the Hot Springs Reservation are all radioactive to a marked degree, and that the radioactivity of the waters is due to dissolved radium emanation (a gas) and not to the presence of salts of radium or other radioactive solids, and that the tufa deposited by the springs does not contain appreciable traces of radium. (See report of superintendent, Hot Springs Reservation, in the Annual Report of the Interior Department, 1905, page 737.)

Fig. 2.

The central power plant furnishes heat for the entire group of hospital buildings, power for the ice machine, electric lighting and electric power apparatus, laundry, and the pumps fill the reservoirs which supply water to the various baths. The water for drinking and cooking purposes is obtained from the city mains.

Fig. 3.

Fig. 4.

The Army Nurse Corps Home, for female nurses, one of the recently completed buildings, is a simple structure conveniently arranged to accommodate one chief nurse and fifteen nurses. The interior is finished white,

Army and Navy General Hospital. Fig. 1—General view. Fig. 2—The north gate. Fig. 3—Wards 3 and 4. Fig. 4—Army nurse corps home.

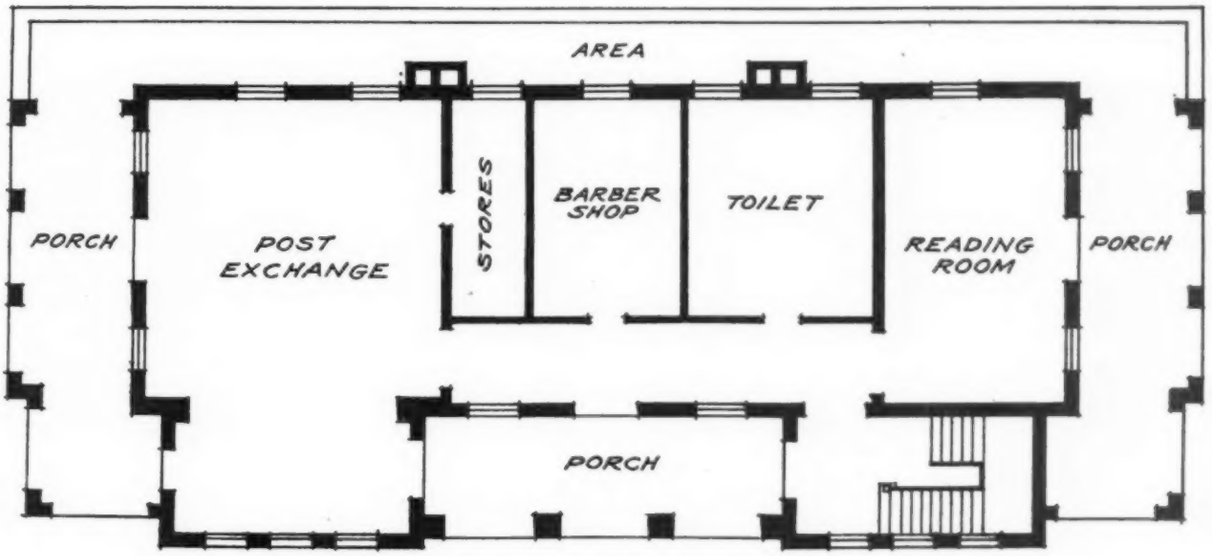


Fig. 5. Army and Navy General Hospital. First floor plan—hospital corps barrack.

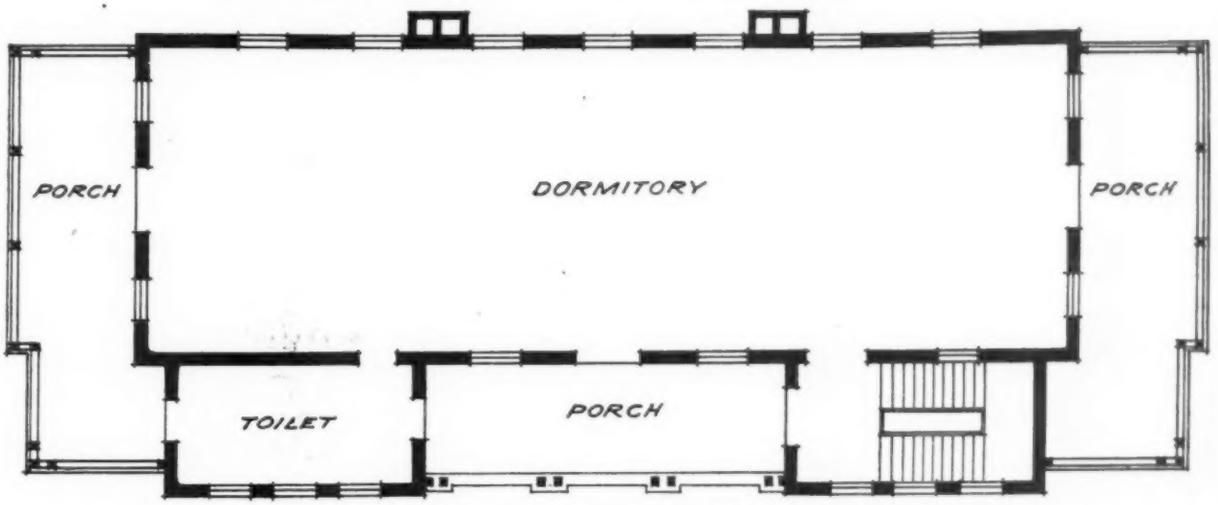
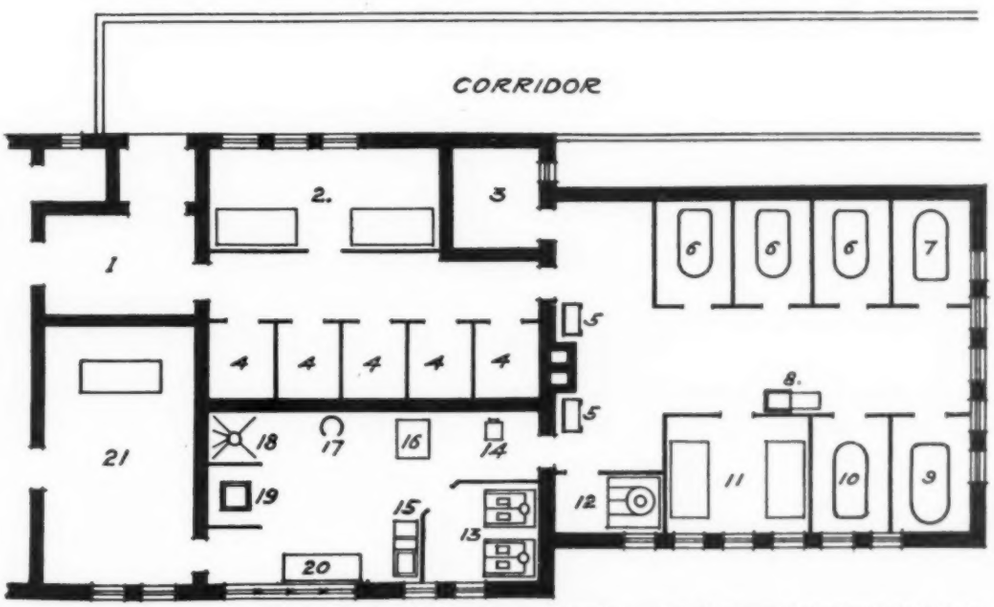


Fig. 6. Army and Navy General Hospital. Second and third floor plan—hospital corps barrack.



1. Entrance hall.
2. Rest room.
3. Toilet.
4. Dressing rooms.
5. Blanket warmers.
6. Regular baths.
7. Nauheim bath.
8. Pack sink.
9. Continuous bath.
10. Electric bath.
11. Pack room.
12. Electric cabinet.
13. Hot air cabinets.
14. Scales.
15. Fomentation sink.
16. Control table.
17. Perineal.
18. Shower.
19. Sitz bath.
20. Shampoo.
21. Massage room.

Fig. 7. Army and Navy General Hospital. Plan of officers' hydrotherapeutic baths.

Fig. 8.

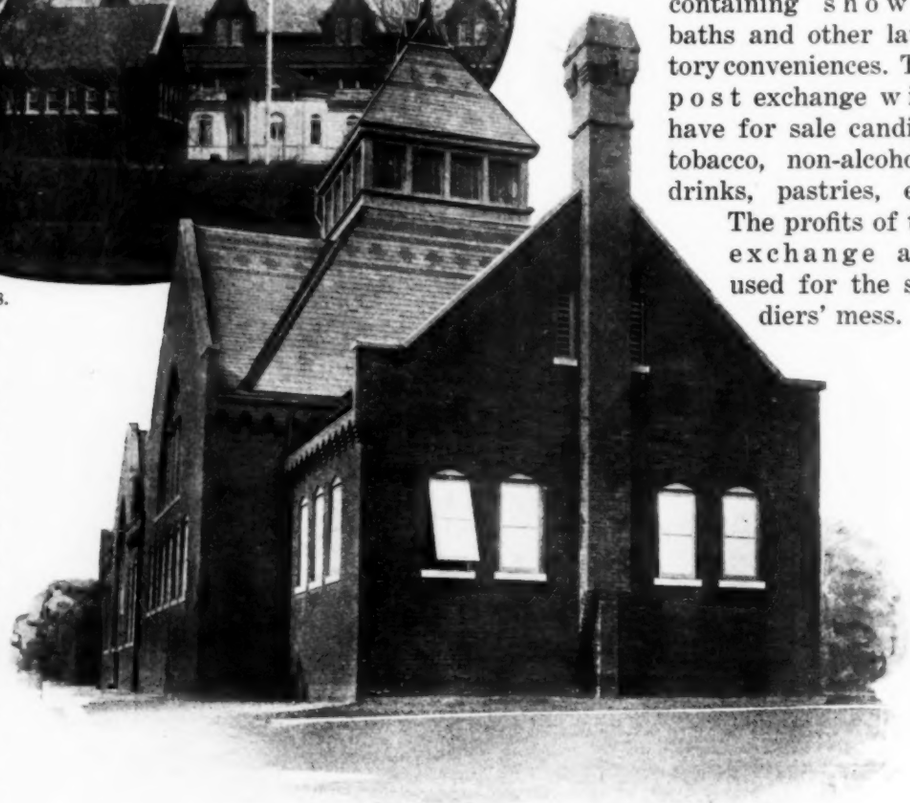


Fig. 9.

Army and Navy General Hospital. Fig. 8—Bath house and ward. Fig. 9—Bath house, south end.

with mahogany stained birch doors and hand rails of staircase. Each nurse is provided with a separate room and ample closet space. The toilets have tile floors and wainscoting and are equipped with modern plumbing fixtures. The plans and the reproduction of the photograph of the building are self-explanatory.

The bath house has been overhauled and new plumbing fixtures installed, and a new addition erected for the officers' hydrotherapeutic baths. This addition is modern in every respect, as a reference to the plan will indicate. The floors throughout are of tile and all the rooms are wainscoted with marble 6 feet 6 inches high; the balance of the walls and ceiling are plastered with hard white cement plaster.

The Hospital Corps Barrack, under construction, is for the male nurses of the army. When completed, the building will quarter fifty-two privates and six sergeants.

As will be seen in the plans, the first floor is arranged for a post exchange, reading room, barber shop, and toilet containing shower baths and other lavatory conveniences. The post exchange will have for sale candies, tobacco, non-alcoholic drinks, pastries, etc. The profits of the exchange are used for the soldiers' mess.

The ward buildings are without any special arrangement, the ceilings are high, porch room ample, arranged so that portions can be closed and used as solariums in winter, and they have protected corridors leading to baths and mess rooms.

Colonel Winter has as his assistants Major Keller and Captains Fife, Culler and Welles, all officers of the Medical Corps, United States Army.

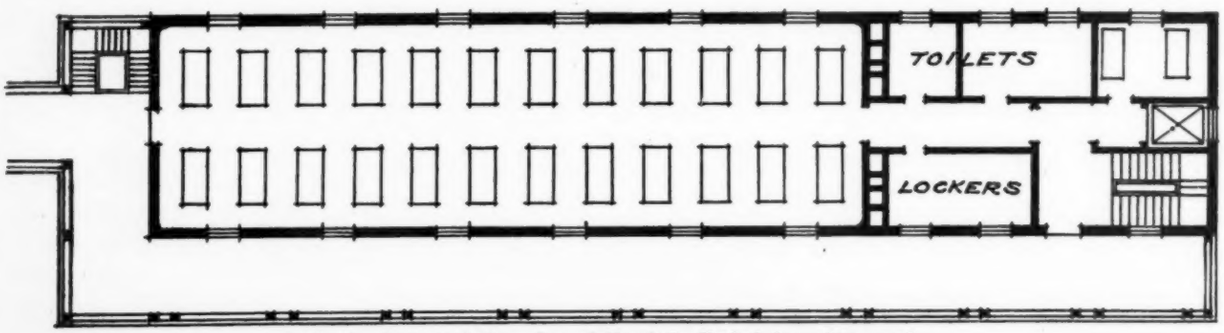


Fig. 10. Army and Navy General Hospital. Typical floor plan—ward.

EDIBLE PASTES—MACARONI, SPAGHETTI, VERMICELLI, NOODLES[1]

Inexpensive Sources of Nutritious Foods—Coloring Matters in Bulk Goods—Needed Changes in the Requirements of the Federal Standards —Precautions in Purchasing

By JOHN PHILLIPS STREET, Chemist Connecticut Agricultural Experiment Station, New Haven, Conn.

THE edible pastes made from dough are of the two main classes—those of Italian origin, which include macaroni, spaghetti, vermicelli, etc., the name referring to the shape of the finished product, and those of German origin, noodles, which are generally flat strips of dried dough. The raw materials used in these two quite similar classes of products, however, show important differences. Macaroni, spaghetti, and vermicelli are made of the semolina of wheat rich in gluten (preferably of durum or other hard varieties) and mixed into a dough with water. Noodles, on the other hand, are made with wheat flour and eggs. An inferior variety of noodles, known as "plain" or "water" noodles, is made without egg, and is simply a mixture of wheat flour and water. Occasionally also the manufacturers of the Italian products use egg, which increases the food value of the article, but is by no means an essential constituent of the genuine paste. Another grade of macaroni is made from a mixture of durum semolina and ordinary flour, while the poorest grades are made chiefly from ordinary wheat flour and colored to simulate the true product. There is considerable doubt, however, whether this low-grade article is at all entitled to be called macaroni. Whatever the nature of the raw materials used, the pastes obtained from their admixture are passed mechanically through metal vessels with perforated bottoms and are formed into various shapes and dried.

It is generally conceded that the highest grade of macaroni (and the term is used here generically to include also spaghetti and vermicelli) is made from the semolina of wheat of the durum type, which is grown chiefly in Russia, Algeria, and the drier sections of this country. Such a paste will have a pronounced natural amber yellow color, and will be translucent and with a vitreous fracture. Paste made from the flour of durum wheat instead of from its semolina, and from the harder grades of ordinary wheat, are generally of a grayish-white color. An objection to these flour macaronis is their stickiness when cooked, a serious objection except in dishes like macaroni au gratin, where stickiness is desirable and will be developed by the cheese, regardless of the grade of macaroni used.

In order to compete with the high-grade article, artificial color, vegetable or coal-tar, is often used with the low-grade pastes. It is of interest to note that the American Macaroni and Noodle Manufacturers' Association is on record in favor of the prohibition of all added coloring matter in edible pastes, whether declared on the label or not. No artificial color is necessary in the high-grade product made from the semolina of durum wheat, and its use in the inferior grades is simply to conceal inferiority and for purposes of deception. The Federal authorities have ruled against the use of color both in macaroni and similar pastes and in egg noodles, and this ruling should be of great advantage to the legitimate industry and to the consumer as well. At present we import annually about 100,000,000 pounds of macaroni, largely on account of the superior reputation of the foreign product made from the durum semolina. The use of similar raw material by our own manufacturers and the omission of all artificial coloring would doubtless increase the reputation of the American product and greatly reduce the amount annually imported.

This prohibition of color, of course, would not prevent the manufacture of the inferior product, but the latter would no longer be able to compete unfairly with the high-grade article, and naturally would be sold at a lower price, which is as it should be.

It has been suggested by some that a statement on the label that color had been used would be sufficient protection to the consumer. Such claimants, however, lose sight of the fact that over 60 percent of all the macaroni sold in this country is sold in bulk, and sales conducted in such a way offer great opportunities for deception. Should a consumer attempt to buy this bulk macaroni at the ordinary grocery store, he would find it, as a rule, put up in 22-pound boxes, and the warning words, "artificially colored," if present, usually skillfully covered up with the blue paper lining of the box, and consequently the label in these circumstances would afford him no protection whatever.

Another much discussed question is the use of eggs in noodles. It appears from the best evidence that noodles as originally made in Germany contained egg, and that, when this important and characteristic ingredient was omitted, the product was called "water" noodles. The amount of egg

[1]This is one of a series of papers on Foods, to be followed by articles on the same subject.

and the nature of the egg material used varies with the different manufacturers. The genuine noodles contain from one and one-half to three eggs per pound of flour; in the imitation product the amount may vary from one-quarter to one-half an egg, or no egg is used at all. The eggs employed may be fresh eggs, eggs preserved in lime water, dried eggs, or broken eggs imported from China or elsewhere. The standard adopted by the Joint Committee of Food Definitions and Standards requires that noodles (egg noodles) shall contain "not less that 5 percent by weight of the solids of whole, sound egg exclusive of the shell;" this is equivalent to about one and one-half eggs per pound of flour. Noodles containing less than this amount of egg must be designated as "plain" or "water" noodles.

The use of artificial color in the manufacture of noodles is even more objectionable than in the case of macaroni. The artificial color conceals the absence of egg, and therefore is deceptive as to the quality of the noodles. The use of such color formerly was almost universal even in high-grade brands, in the latter probably because of the unfair competition of the colored product. A review of three inspections of noodles in Connecticut shows clearly the former conditions maintaining in the market and the great improvement in recent years. In 1901 four of twenty-eight samples contained egg and twenty-two were artificially colored; in 1904 five of twenty-two samples contained egg and all were artificially colored; in 1915 eight of ten samples (in package form) contained egg and none was colored. In the latter inspection bulk goods were not examined; if they had been examined, the showing would probably not have been quite so favorable.

TABLE I. ANALYSES OF MACARONI

Brand	Water	Ash	Protein (N x 6.25)	Nitrogen-free extract and fiber	Fat	Calories per 100 grams
FOREIGN BRANDS						
Sceau d'Or	12.71	0.47	12.37	74.11	0.34	.....
Rodier	10.34	0.64	13.00	75.60	0.42	.....
La Armor	12.65	0.64	13.19	72.81	0.71	.....
Crown	12.33	0.67	14.12	72.26	0.62	.....
Margerie	12.61	0.69	12.69	73.71	0.30	.....
Calvé	13.14	0.93	12.69	72.98	0.26	.....
La Bella	13.53	0.66	12.87	72.65	0.29	.....
Chevalier	13.17	0.50	12.62	73.19	0.52	.....
Marin	12.24	0.75	13.44	73.30	0.27	.....
L'Aquila	12.64	0.95	13.12	72.57	0.72	.....
Scaramelli	12.94	0.61	13.00	73.07	0.38	.....
Campagnia Italiana	12.88	0.75	13.12	72.48	0.77	.....
Sounette	11.78	0.87	14.00	72.97	0.38	.....
Rivals and Audebert	12.80	0.65	12.50	73.78	0.27	.....
Cordon Rouge	12.48	0.85	14.62	71.75	0.30	.....
Camina	12.38	0.72	15.44	70.37	1.09	.....
DOMESTIC BRANDS						
Castle	11.95	0.66	13.87	73.27	0.25	.....
Marvelli	13.40	0.46	20.69	64.82	0.63	.....
Climax (Pfaffmann)	12.33	0.49	14.12	72.57	0.49	.....
Gold Medal	13.29	0.79	13.69	71.63	0.60	.....
Flag (Mueller)	12.29	0.89	12.75	73.58	0.49	.....
Club (Warner-Hotaling Co.)	12.85	0.50	14.69	71.57	0.39	.....
Average (37)	12.71	0.67	14.00	72.15	0.47	349
Maximum (37	14.32	0.96	20.69	75.60	1.11	.....
Minimum (37)	10.34	0.38	11.94	64.82	0.15	.....

The importance of these pastes as foods is worthy of careful consideration. Tables I and II give certain typical analyses made in this laboratory of foreign and domestic brands of macaroni, spaghetti, and vermicelli. Although there are individual variations, the average composition of the three products is nearly the same, showing from 13 to 14 percent of protein, from 0.4 to 0.5 percent of fat, and from 72 to 73 percent of carbohydrates, with an average calorific value of 349 calories per 100 grams. Analytical figures show little as to the quality of these three pastes, which depends more on the color, texture, and flavor than actual composition; for instance, a high protein content, instead of indicating quality, may be due to the use of an inferior wheat—that is, one inferior from the macaroni standpoint.

TABLE II. ANALYSES OF SPAGHETTI AND VERMICELLI

Brand	Water	Ash	Protein (N x 6.25)	Nitrogen-free extract and fiber	Fat	Calories per 100 grams
SPAGHETTI						
Rivals	13.03	0.68	13.37	72.57	0.35	.....
Sceau d'Or	13.06	0.58	13.37	72.60	0.39	.....
Windmill	12.69	0.65	12.81	73.66	0.19	.....
Le Lion	13.00	0.72	12.06	73.62	0.60	.....
Crown	12.68	0.67	12.94	73.40	0.31	.....
Clermont	13.37	0.46	11.94	73.91	0.32	.....
Clerget	13.21	0.66	12.00	73.78	0.35	.....
Average (8)	13.03	0.61	12.70	73.27	0.39	347
Maximum (8)	13.37	0.72	13.37	73.91	0.62	.....
Minimum (8)	12.68	0.46	11.94	72.60	0.19	.....
VERMICELLI						
La Flora	11.48	0.83	12.94	74.33	0.42	.....
Scaramelli	11.98	0.70	13.94	73.01	0.37	.....
Margerie	12.11	0.72	14.12	72.72	0.33	.....
La Bella	12.23	0.69	12.81	73.95	0.32	.....
Laroze	12.07	0.97	14.56	71.97	0.43	.....
Monarch (Austin, Nichols & Co.)	12.70	0.53	13.19	73.11	0.47	.....
Columbia (Columbia Mfg. Co.)	12.22	0.72	12.75	73.82	0.49	.....
Average (10)	12.23	0.71	13.58	73.07	0.41	350
Maximum (10)	12.73	0.97	15.31	74.33	0.63	.....
Minimum (10)	11.48	0.48	12.06	71.52	0.31	.....

A good illustration of the nutritive value of macaroni is given by the well-known preparation, baked macaroni—macaroni au gratin. A familiar recipe for this delectable dish is 4 ounces of macaroni, 4 ounces of cheese, 0.25 pint of cream, and 1 ounce of butter. Such a mixture would contain 1.7 ounces of protein, 3 ounces of fat, and 3.2 ounces of carbohydrates, and would yield 1,321 calories, or nearly half the daily requirement, at a cost of about 14 cents.

In the case of noodles the situation is different. Here analytical data are very informatory, and a high fat and lecithin phosphoric acid content are quite certain indications of the use of egg; as a rule, these values increasing in proportion to the amount of egg used. Table III shows analyses of typical brands. It will be noted that the average fat in the egg noodles is 2.39 and in the water

noodles is 0.54 percent, while the lecithin phosphoric acid content of the former is twice that found in the water noodles. The latter shows the same calorific value as macaroni, while where eggs are used this increases twelve points. The extremely high ash figures shown by two of the brands is due to the presence of nearly 2 percent of common salt.

Certain brands of these edible pastes have been exploited for the feeding of the diabetic. The analyses of nine of these are given in Table IV.

TABLE III. ANALYSES OF NOODLES

Brand	Water	Ash	Protein (N x 6.25)	Nitrogen-free extract and fiber	Fat	Lecithin phosphoric acid	Calories per 100 grams
Golden Seal (Anger).....	12.81	0.72	14.69	70.08	1.70	.....	....
Golden Seal (Anger).....	12.91	0.57	15.31	69.62	1.59	0.040	....
Golden Seal (Anger).....	12.72	0.61	13.25	71.79	1.63	0.035	....
Babyhead (Anger)	10.58	0.71	15.81	70.76	2.14	0.031	....
Fine (Bremen-Mfg. Co.)..	13.39	0.54	13.19	72.45	0.43	.....	....
Wide (Bremen Mfg. Co.)..	12.61	0.58	12.19	74.21	0.41	.....	....
Climax (Pfaffmann).....	12.53	0.86	13.62	72.43	0.36	.....	....
Exquisite (Philadelphia Noodle Co.)	13.14	3.15	16.69	61.32	5.70	.....	....
Fine (Mueller)	12.75	0.88	12.69	73.34	0.34	.....	....
Fine (Mueller)	10.56	1.02	14.00	71.61	2.81	0.047	....
White Leghorn (Mueller)..	12.32	0.98	14.75	70.13	1.82	.....	....
White Leghorn (Mueller)..	12.36	0.90	15.62	69.11	2.01	0.050	....
White Leghorn (Mueller)..	12.84	0.87	15.75	68.51	2.03	0.046	....
Golden Egg (French Deliv. Co.)	12.94	2.65	13.12	70.53	0.76	.....	....
Excelsior (De Forth).....	13.15	0.55	13.62	72.27	0.41	.....	....
White Rose (Seeman).....	12.89	0.58	14.25	69.58	2.70	.....	....
Monarch (Austin, Nichols & Co.)	12.65	0.50	14.06	72.50	0.29	.....	....
Republic (Austin, Nichols & Co.)	10.86	2.07	12.94	72.20	1.93	0.035	....
Maas	12.66	0.66	15.19	70.47	1.02	0.028	....
Gold Medal (Maas).....	8.46	1.00	14.19	73.31	3.04	0.062	....
Regensburger	13.59	0.63	14.00	70.10	1.68	0.031	....
Golden Egg (Cleveland Macaroni Co.)	7.76	2.50	14.19	73.36	2.19	0.045	....
Medium Egg (Freihofer)..	10.54	0.67	12.88	74.02	1.89	0.037	....
Fine Egg (Goodman).....	10.85	1.69	15.00	68.88	3.58	0.056	....
Warner's (Warner- Hotaling Co.)	8.36	0.80	13.88	75.94	1.02	0.024	....
A. & P. Egg (Great Atl. & Pac. Tea Co.).....	10.57	2.16	13.00	71.45	2.88	0.036	....
Mohican	10.98	0.65	14.56	72.30	1.51	0.031	....
Average, egg noodles (18)	11.63	1.19	14.45	70.34	2.39	0.042	361
Average, wafer noodles (44)	12.55	0.85	13.30	72.76	0.54	0.021	349
Maximum, all (62).....	13.84	3.15	16.69	75.94	5.70	0.062	....
Minimum, all (62).....	7.76	0.43	12.12	61.32	0.22	0.013	....

The Brusson, Dieto, and Jireh brands have nothing to commend them as special foods for the diabetic, their carbohydrate and starch content being actually somewhat higher than the ordinary unexploited brands. The Hoyt and Loeb preparations, on the other hand, show a carbohydrate reduction of from 40 to 50 percent and are not without merit for the purposes claimed.

TABLE IV. ANALYSES OF "DIABETIC" MACARONI, NOODLES, AND VERMICELLI

Brand	Water	Ash	Protein (N x 6.25)	Nitrogen-free extract and fiber	Fat	Starch	Calories per 100 grams
MACARONI							
Hoyt's Gum Gluten..	10.34	0.74	41.37	46.57	0.98	46.22	360
Brusson	8.57	0.68	13.94	76.38	0.43	69.21	364
Jireh	8.80	1.10	16.90	72.30	0.90	58.80	361
Dieto Whole Wheat.	9.81	0.90	13.88	74.27	1.14	58.72	361
NOODLES							
Brusson	8.67	0.65	14.38	75.77	0.53	68.90	365
Loeb's Home Made..	9.80	1.00	41.80	41.90	5.50	36.70	384
Hoyt's Gum Gluten..	8.26	1.13	36.56	51.69	2.36	42.03	374
Hoyt's Gum Gluten..	8.21	0.65	40.50	49.41	1.23	41.82	369
VERMICELLI							
Brusson	7.96	0.80	18.44	72.37	0.43	65.79	367

PURCHASING TEXTILES FOR HOSPITALS

Character of Raw Goods, Weave, Count, Weight, and Dyes or Bleaches Are Important

The buyer of institution supplies, to be efficient, must be informed on such varied lines of merchandise that it requires constant attention to keep abreast of the times and secure the best for the least outlay of funds—to buy at the proper time, in adequate quantities, etc.

In the textile field alone there are such diversified fabrics and so many different kinds of each class that, unless a buyer is informed as to the fastness of colors, texture, weight, and general construction of dry goods, the institution for which the purchasing is done will fall far short of getting full value for money spent along these lines, and the outlay for textiles alone by institutions in the United States is estimated at about $5,000,000 yearly.

At this time, when the prices of dyestuffs and raw cotton are abnormally high, there is a strong tendency on the part of some manufacturers to save here and there, and, while the best grades of fabric may be a few cents higher in cost, it will be found well worth the difference to stick fast to brands of well-known merit, and this applies in normal times as well.

A well-known cotton goods house, operating for almost a century, has given assurance that all its fabrics bought under their established brands will be fully up to prewar quality, and that wherever it may be necessary to lower the standard of color in any fabric, the goods so made will be marketed under a different name. This house, realizing the value of a little technical knowledge on the part of purchasers, has issued "A Few A B C's" for buyers of fabrics well worth studying, and herewith given:

"The best fabrics for institution use are those that give the greatest satisfaction and wear longest. The construction, the weight, the colors or the bleach, and the grade of cotton used are the important factors to be considered. All cotton fabrics are made by interlacing two sets of threads or yarn—one set of threads running lengthwise in the piece, and the other crosswise back and forth across the piece. The method of interlacing these two sets of threads determines the 'weave' of the fabric.

"There is a variety of weaves, but, ordinarily, cotton fabrics are either plain weave or drill weave. A plain weave is one in which the threads interlace regularly, one by one, and give a flat, even appearance. A drill or twill weave is one in which the threads running one way, usually lengthwise, regularly skip a number of threads in such a way that the cloth, when finished, has the appearance of the threads running diagonally through it, although they actually run only lengthwise and crosswise at right angles. Almost all sheetings and ginghams are plain weave. Drill or twill-woven goods are usually the heavier grades, with the exception of cotton ducks, which are known as 'duck weave,' a weave quite similar to the plain.

"The 'count' of goods represents the number of threads running each way in one square inch—thus 64x64, 68x72, 80x84, etc., represent the number of threads per inch running each way. The 'weight' is usually spoken of decimally, as 'two fifty' (2.50), meaning that 2.50 or 2½ yards weigh 1 pound, 2.75 means 2¾ yards to the pound, etc. Goods that weigh three yards to the pound are sometimes spoken of as 3-yard goods. Two-yard goods (2.50) are known as 9-ounce, 10-ounce, etc., meaning that these goods weigh so many ounces per linear yard.

"The dyes or bleaches and the grades of cotton used can be determined only by the service the goods give in use. The better the quality of these essentials, the longer the fabric will stand the wear and tear given it."

PLANS FOR A COUNTY TUBERCULOSIS HOSPITAL[1]

Designer Urges That Advanced Cases Cannot Be Cared For in Shacks, and Incipient Cases Can Go Into a Block Hospital—Proposed Institution to Be Part of General Hospital

By WALTER H. WATTERSON, M. D., Head Physician, and L. F. SUTTON, M. D., of the Staff, Cook County Tuberculosis Hospital, Oak Forest, Ill.

LAW imposes on the county the duty of providing care and treatment for the tuberculous in thirteen states—namely, New York, New Jersey, Washington, Texas, Ohio, Wisconsin, Minnesota, Indiana, Missouri, Iowa, Michigan, Kentucky, and Illinois, the last nine states members of this conference. Illinois alone has eight or more counties now contemplating the erection of institutions for the care and treatment of the tuberculous, and other states are doing as much or more.

Unless we, as medical men, propose the proper construction of these institutions, we fail to grasp an opportunity to do the tuberculosis movement the greatest service—a service expected of us. A careful study of the problems, with visits to all the principal tuberculosis sanatoriums in the East, where past mistakes have been dear lessons, has convinced us that the hospital unit, not the cottage nor the "lean-to," is the appropriate construction for the country's care of these cases.

Our argument for this construction is short, but we are sure it is convincing; at least to those who will make some study of the situation.

Some may think they are to cure their patients in these institutions, but such impressions are not borne out by facts, which show that, at best, but 5 percent to 10 percent are cured in sanatoriums now in operation. The overenthusiastic, who, in their efforts to induce their community to build sanatoriums, give extravagant promises, will later have to meet embarrassing inquiries.

Then let us first know what we are building the sanatoriums for.

The objects are to solve the prophylactic, therapeutic, and social problems of tuberculosis. The difficulty of convincing the incipient case that he has the disease and the stigma of entering a tuberculosis institution with its unavoidable institutional atmosphere leave the class of patients for whom the county institutions are built as principally advanced cases. The occasional incipient case can easily be placed in the hospital, but the advanced cannot be efficiently cared for in the cottage without the imposition of much more expense to the public than the same hospital care would impose. The hospital permits of temporary occupancy by employees, or enlargement to meet future demands without detracting from the efficiency of the initial structure.

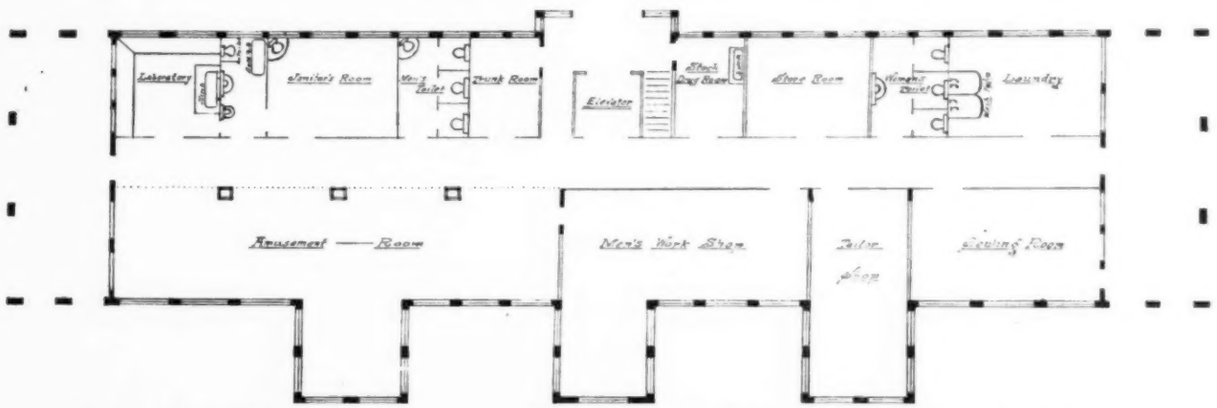


Fig. 1. Proposed Plan of a County Tuberculosis Hospital. Capacity, 40 beds. Basement floor plan, on level with ground.

The first cost of a hospital may be more than the cottage system, but the ultimate usefulness and economy of administration is not long in making up this excess of initial cost. Considering all this, and believing that the county's principal duty is to care for the advanced tuberculous until they regain their strength, for those with acute and subacute exacerbation during the long chronic course of phthisis, for those who need the discipline of an institution, those without homes, those without will-power, and for the advanced cases, or those who cannot properly arrange their treatment at home for, at least, certain months in the year. We propose the accompanying plans of construction, objection to which, should there be any, we will gladly discuss with you.

[1]Paper read and plans shown before the Mississippi Valley Conference on Tuberculosis, Louisville, Ky., October 4, 1916.

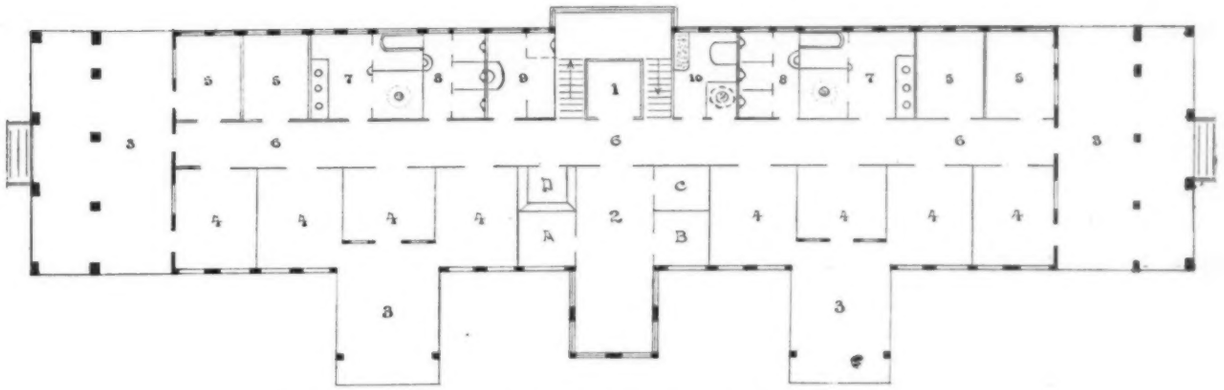


Fig. 2. Proposed Plan of a County Tuberculosis Hospital. First floor plan.

Fig. 3. Proposed Plan of a County Tuberculosis Hospital. Second floor plan—same as first floor plan.

1. Elevator.
2. Nurses' room and office.
3. Porches.
4. Two-bed rooms.
5. Single rooms.
6. Corridor.
7. Wash and bath room (shower, needle, and tub).
8. Patients' toilet room.
9. Nurses' toilet and wash room.
10. Utility room, with incinerator.
11. Swinging fire escape.

A. Medicine room.
B. Head nurse's coat room.
C. Attendant nurses' coat room.
D. Linen room.

WHAT DISPENSARY WORK SHOULD STAND FOR[1]

The Reasons For Good Service—Heading Off Incipient Disease—Preventive Work—Care of Chronics—Teaching the Public Self-Care—Medical Education and Social Service

By RICHARD C. CABOT, M. D., Boston

FOR the most extensive medical service at the least cost.

2. For preventive and educational work in the incipient stages of disease.

3. For education and guidance in chronic disease.

4. For medical organizations: (a) through cooperation of physicians expert in different fields of medicine; (b) through cooperation of physicians with social workers, psychologists, technicians, and assistants of various grades.

5. For medical education, graduate or undergraduate, and for the education of all types of non-medical assistants.

6. For a continuous public object-lesson on the advantages of group medicine and the limitations of private practice.

[1]Read at the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

Examining this platform plank by plank, I think it is demonstrable *that the largest and cheapest output* of satisfactory medical work is secured in a *good* dispensary, while the largest and cheapest output of medical fakes issues from a *bad* dispensary.

The contrast here is both with hospital ward service and with private practice. In ward service a given expenditure of money and time serves relatively few people. The usual assumption is that ward cases are more important than dispensary cases because more serious. But this traditional dogma may well be doubted. Many ward cases (involving the nose and throat or the female pelvis) are not serious unless an enterprising surgeon makes them so. Others are undeniably more serious than ambulatory cases, but the service given them is so slight and temporary that its importance is limited. Nephritis, chlorosis, and

arteriosclerosis exemplify this class. We may succeed in patching them up for a short time, but that is all; and such patients are often disappointed with the meager benefits at considerable cost. On the other hand, no one can deny the public and private importance of syphilis, gonorrhea, tuberculosis, diabetes, goiter, children's digestive disturbance, and many other diseases which are best treated in the dispensary during most of their course.

It seems to me clear that anyone who has money to spend for medical service can do more good with it by starting a dispensary than by building a hospital. Of course, we need both; but if the choice must be made, and the public good is our only object, the dispensary seems to me preferable. Some further reasons for the preference are given below.

Preventive work is admittedly one of the most important pieces of medical service. Obviously it is to be done in the incipient stages of disease, or earlier still. This means that preventive medicine is concerned largely with ambulatory patients and their families—in other words, with persons best treated in a dispensary.

To teach the tuberculous how to live, to examine and warn the members of their families, is now a settled requirement in good dispensary clinics. But this applies just as forcibly to syphilitics and gonorrheics. They, too, must be treated and taught in family groups, through which, as through the well-drilled victims of tuberculosis, the general public can learn the truths of preventive medicine and the lies of the quack. The instruction of mothers in baby feeding, or workmen in industrial disease, and of the neurasthenics in self-control send waves of medical enlightenment spreading through the community. Object lessons, harangues, and printed instructions may in this way propagate a dispensary's influence through a city or through a state. Class methods are useful and time-saving, but need not be here described.

Chronic diseases, such as diabetes, goiter, peptic ulcer, bronchiectasis, arteriosclerosis, and tabes dorsalis, can be materially helped by weekly or monthly supervision in a dispensary. Diabetics can be taught to starve themselves until sugar-free, and to maintain their working power through months and years, if their diet is carefully and frequently supervised in a dispensary clinic. The most intelligent can be taught food values and the principles of the diabetic regimen so that in time they can almost care for themselves. The reeducation of a neurasthenic (chiefly to be accomplished by social workers) will not banish his disease, but may banish his idleness and make him once more a wage-earner and a consumer of his own smoke.

As an object lesson in the sensible, economic, and honest organization of medical industry, the dispensary is now society's most powerful weapon against the evils and anachronisms of private practice. By private practice I mean here the attempts of the individual physician to diagnose and to treat single-handed a clientele which no living man is wise enough and skillful enough to treat satisfactorily. Without the aid of x-ray, Wassermann, or cystoscope, a large number of men are now trying to diagnose and to treat headaches, joint pains, and bellyaches, which only a group of cooperating experts can understand.

The private practitioner is often a broader, cleverer, more resourceful man than the more specially trained member of a diagnostic group. But the unaided private practitioner cannot often do better work than the whole group functioning as a unit. He cannot be at once a radiologist, an internist, and a laboratory technician—far less an internist and a skillful operator on all parts of the body, as any so-called "physician and surgeon" must try to be.

In the dispensary men learn to work together in groups and become expert through constant practice within a limited field. Working in groups means something more than sitting in adjacent rooms. It means knowing when to call in another man and when not to occupy him unnecessarily. It means the ability to teach and to learn within the group, so that it becomes constantly better knit—a faster as well as a more accurate team. A dispensary physician who does not use his associates as consultants frequently and skillfully is not fit for the job.

But medical organization in a dispensary means not only the team-work of peers. It means the stratification and sifting out of jobs, so that a physician never need spend much time on work which a less highly trained person can do.

(a) Routine laboratory work, temperatures, weights, hemoglobins, bandaging, simple dressings, blood pressures, and part of the written history can best be done by trained and paid assistants or by medical students.

(b) Follow-up letters, transfer of patients from one department to another, daily statistics, and other details in the smooth running of a clinic should be in the hands of a permanent clinic secretary.

(c) Investigation of home conditions, of work places of the psychic, and emotional factors in disease and of the financial obstacles hindering the patient's recovery should be assigned to the social worker; not as a permanent depository of all

responsibility for the patient, but as an assistant and consultant for the physician.

Such a division of labor among persons of different degrees and kinds of training is essential to good medical work, yet is almost unknown in private practice. The dispensary should develop and uphold good standards of organization and stratification in medical industry.

Education not only of the public, but of future doctors, social workers, and technicians should be carried on in dispensaries as well as in hospital wards, or better. I recognize that for medical students the example of the worse grades of dispensary work may be disastrous. To see a roomful of patients "run off" so rapidly as to insure slovenly diagnosis and quackish treatment is to tear down instead of building up the student's capacity. On the other hand, good dispensary work furnishes first-rate training in diagnosis, in the guidance of patients, and in the knack of "getting at" all sorts and ages of both sexes—under conditions less abnormal than those of a hospital ward.

Through a strange twist of fortune, the dispensary, started as an humble agency for distributing or "dispensing" drugs to those prevented by poverty from getting any better medical care, has come to be the best public demonstration of how medical work should always be done, the best exemplar of medical forces organized for accurate and thorough service.

Private groups of physicians, organized into partnership so as to insure competence in all the mutually dependent divisions of medical skill, inevitably take the form of a nest of offices arranged around a common waiting room, with common records and a common fee. This is simply a small dispensary in all but name. Indeed, the huge diagnostic machine of the Mayo clinic is nothing but an up-to-date dispensary, with fees somewhat higher than those of other dispensaries.

SUMMARY

To sum up, what, then, should dispensary work stand for? For all that is best in modern medical practice.

THE LIGHTING OF HOSPITALS IN GREAT BRITAIN

Gas Coming Back as the Choice of Illuminants—Relative Merits of Electricity and Gas—Operating Theaters Still Use Electricity—Illumination of Country Hospitals

By SYDNEY F. WALKER, Bath, England

FOR hospitals in all towns where there is an electricity generating station the electric incandescent lamp has been almost universally employed for a long time past, but during recent years there has been a tendency to return to gas. In the early days of the incandescent electric lamp there was a very strong feeling in its favor among hospital authorities, as well as among the general public, on account of the admitted advantage it possesses that no oxygen is taken from the atmosphere. Although in those days the cost of lighting by electricity was so very much greater than by gas, its supposed advantages were so great that the extra cost was more than counterbalanced. The introduction of the electric light into hospitals took place at about the same time that the vigorous campaign against lodgments for bacilli commenced. It was part of the regeneration of hospitals that was then going on. In addition to this, gas at that time had a very bad name. Gas companies had ridden very roughly over the public generally, and the electric light had been welcomed as a savior, whose cost did not matter. Since then, however, there has been a considerable revulsion of feeling in the matter. Gas engineers have put their houses in order, and have greatly improved the quality of their light and lessened its cost, the latter having steadily decreased. The advent of the welsbach mantle and its subsequent improvement have gradually brought gas more and more into competition with the electric light in the matter of quality. The welsbach mantle was itself by no means perfect when it was first introduced; the upright form cast heavy shadows and blackened ceilings, and no modern hospital would allow that; it also flickered a good deal, so that the effect of reading by its aid was very painful as compared with that of the electric incandescent lamp. The inverted mantle, however, with the arrangement for regulating the supply of air, appears to have completely overcome both troubles; the light does not flicker, and there is very little blackening of ceilings. On the other hand, very strong complaints have been made everywhere about the glare of the incandescent electric lamp, and this is intensified in the metallic filament lamps, which burn at so much higher a temperature than the old carbon filament lamps did. Hospitals have also had to consider more carefully the cost of everything used, and naturally the cost of lighting has come up for review. Although with the metallic fila-

ment lamp the cost is about one-third of that with the carbon filament, still in the great majority of cases, for the same illuminating effect gas is cheaper. Further, the hygienic value of illumination by electric light was seriously called in question a few years ago by several able scientists. The late Professor Vivian Lewes, in particular, made some very careful experiments to determine the point. He and Dr. Rideal both declared that, for the illumination of large areas, where a number of people were assembled, the effect of welsbach mantles was to keep the air at breathing level good, while with the electric incandescent lamp it became distinctly bad. Professor Vivian Lewes made an experiment in a dwelling room of a comparatively small house, the capacity of the room being 2,700 cubic feet. It was illuminated first with two welsbach mantles, each consuming 4 cubic feet of gas per hour and giving a light of 70 candles each. It was afterward illuminated by three 16-candle-power electric lamps. The temperature outside was 61° F. in each case, and the air outside contained three parts of CO_2 per 10,000. After the lights had been burning the same time, the temperature at breathing level with gas was 63° F., while with electricity it was only 61.7° F.; but the CO_2 at breathing level with gas was only 5 parts per 1,000, while with electricity it was 6. The temperature at ceiling level and the CO_2 were very much higher with gas than with electricity. Professor Lewes drew the conclusion from this that, due to the porous nature of ceilings, walls, etc., the vitiated air was carried off very much better by gas illumination than by electric light. Since the above experiments were made, gas has been making headway against electricity in hospitals. The electric light has not been displaced, as the cost of fitting up with gas would be heavy, but in any extensions that have been made, and in many of the temporary hospitals that have been fitted up to meet the demand created by the war, some form of gas has been employed. In the earlier installations of gas, upright welsbach mantles were employed, but in the later ones the inverted mantles, with the regulating arrangement for air, have been adopted.

Electrical engineers have not been slow to appreciate the troubles mentioned above in connection with electric light, and they have devised new forms of apparatus, which are shown in Figs. 1, 2, and 3. Fig. 4 is a ward lighted by electric lamps on a modified system, and Figs. 2 and 3 show the arrangement of the lamps. In Fig. 1 the complete lamp and fitting that is seen suspended in the middle of the ward is shown, and Figs. 2 and 3 show the component parts of the fitting. As will be seen from Fig. 2, the incandescent lamp is suspended from the ceiling, and the light giving portion is inclosed inside a metal basin containing a silver glass reflector, arranged to direct the rays of light up to the ceiling through the transparent glass cover, the lighting of the ward being accomplished mainly by reflection from the ceiling and walls. In addition, as will be seen from Fig. 4, there is a bracket and lamp between each two beds, but the lamp is carefully shaded by the special form of shade shown, so that patients in the beds adjoining do not feel the glare and patients in the beds opposite cannot see the lamps. These arrangements for preventing the glare, though they produce very satisfactory illumination, absorb a considerable proportion of the light, so that, if a certain standard of lighting is assumed, the cost will be increased in propor-

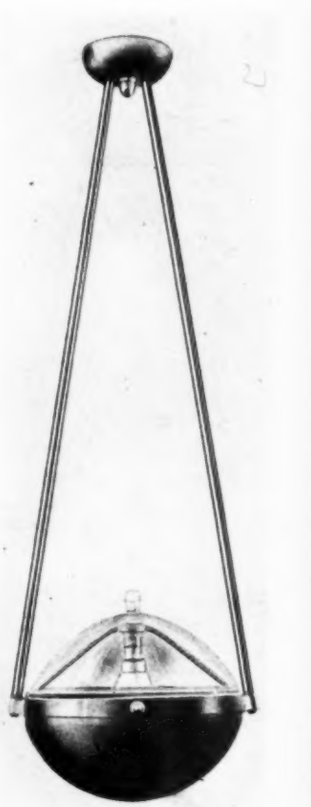


Fig. 1.

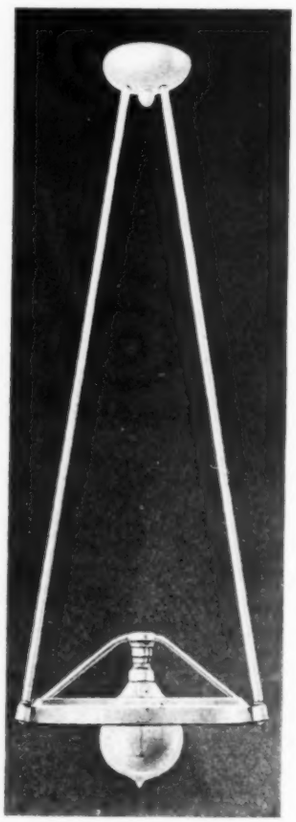


Fig. 2.

Modern ward electric light fitting, worked out by the British Thomson-Houston Company, for indirect lighting.

Fig. 3.

Figs. 2 and 3 are parts of the fitting shown in Fig. 1.

tion to the absorption. The same thing will, of course, rule with gas, but it is claimed that the light rays, being spread over a larger surface, are not as dazzling as those emitted from the fine

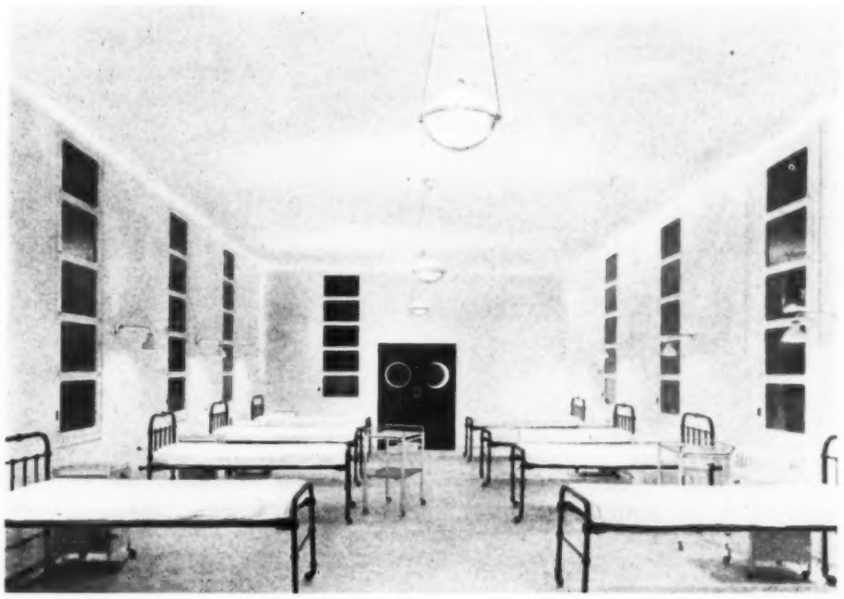


Fig. 4. Ward of a hospital lighted principally by the fittings shown in Figs. 1, 2, 3.

wires of the electric light filament. Gas engineers have, however, been working at the problem of softening the light, just as electrical engineers have, and apparently they have a more difficult task. Numerous frosted globes and other arrangements have been introduced in connection with the inverted welsbach mantle, but there is continual trouble from the globes cracking unless the mantels are frequently inspected, and renewed. If, as frequently happens, a hole is burnt in a mantle, the flame from the burner inside passes through the hole and quickly breaks the globe. Falling glass, at the high temperature which the globe attains often before breaking, is a danger anywhere, and particularly in hospital wards. In the London hospitals, in the extensions that have been lighted by gas, no trouble from this cause appears to have arisen, which is due to the care with which the inspection has been done. For some time back the gas companies and the gas departments of towns have kept a staff of trained men going over all the incandescent mantles every week. The trained eye soon learns when a mantle is going to fail before the next visit, and it is replaced. In addition to the prevention of accidents, the inspection maintains the light given at a very high figure, where without inspection it steadily decreases, partly owing to the collection of dust in the burner, partly to the deterioration of the mantle, and perhaps most of all to the blackening of the globes. With the electric incandescent lamp, lessening of the light also commences from the moment the lamp is put into service, partly owing to the lessening of the sectional area of the filament and partly to the blackening of the bulb, due to its bombardment by minute particles of the disintegrating filament.

LIGHTING OF OPERATING THEATRES

The electric light appears still to reign supreme for operating theaters, but the arrangements employed are various. Fig. 5 shows an operating theater in which the indirect method of illumination was adopted. It was carried out by the same firm, an offshoot from an American company, that worked out the lamps shown in Figs. 1, 2, 3, and 4. Twenty-four prismatic glass reflectors, each containing a 40-candle-power lamp, were suspended together as shown at a height of 10 feet above the operating table. The lamps were inclosed in a water-tight metal casing above, and underneath was fixed a polished, wired plate glass, held by the metal casing, the plate glass being just on a level with the ceiling. The illumination of

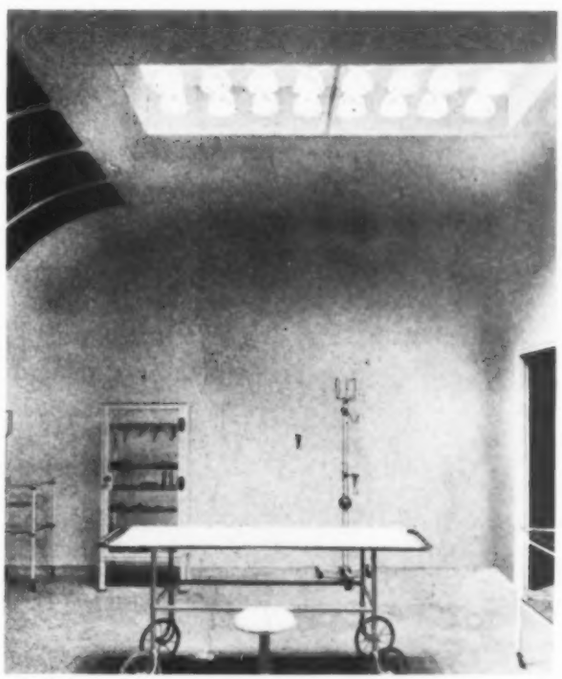


Fig. 5. Operating theater lighted by a cluster of lamps, in special fittings, above the operating table, worked out by the British Thomson-Houston Company.

the operating table is stated to have been equal to 30 foot-candles, while the ward illumination shown in Fig. 4 was 1.75 foot-candles. Other apparatus employed for the operating theater consists of pendant groups of lamps, arranged to be placed in any position the surgeon requires at any moment.

For lighting the wards at night, gas engineers have arranged a special shaded fitting, with an upright mantle inside the shade, light being given mainly underneath the lamp. Electrical engineers have arranged a reversible fitting. The incandescent lamp is held under a reflector shade that can be turned so that the lamp throws its light upward at night.

LIGHTING OF COUNTRY HOSPITALS

For country hospitals there is keen competition between the electric light, generated on the ground by a small plant similar to those used in country houses; acetylene gas, also made on the ground by the usual water and carbide of calcium apparatus; gasoline air gas, made on the ground; and what may be termed kerosene vapor. All of them require attendance, and the attendant should be one who thoroughly understands the working of the apparatus. By act of Parliament, acetylene apparatus has to be located in an outbuilding, quite clear of the main building, as there is danger from the gas. Acetylene gas is used for heating and cooking as well as for lighting. Gasoline air gas is claimed to be less dangerous than ordinary gas; it is made by vaporizing gasoline and mixing it with a certain quantity of air, so that on being lighted it does not require air from outside. The danger of gasoline is at the generator—the possibility of the vapor leaking out, meeting some substance that will ignite it, and firing back. In the kerosene systems the oil is vaporized in the lamp itself that is burning it without a wick, and is forced through the mantle that is employed.

One of the most important xenodochiums of its time was the basilica erected before the gates of Cæsarea, in 370 by Basilius, bishop of Cappadocia. It was considered a greater wonder than the Egyptian pyramids and the Colossus of Rhodus.

The Hôtel Dieu of Lyons was founded in 542 by Childebert I. at the solicitation of Archbishop Sacerdos. This hospital was also called xenodochium and was under the supervision of laymen. It was not turned over to the clergy until six hundred years later (1308).

Miss Rose Walker, superintendent of the El Reno Sanatorium, El Reno, Okla., was reelected president of the Oklahoma Graduate Nurses' Association at the annual meeting held in Muskogee the latter part of October.

NEW YORK SEEKS CLINIC DOCTORS

The New Occupational Clinic Now Covers Almost All Trades and Asks for Medical Officers

In a city such as New York, where so many unique and important undertakings are in order, it is no wonder that some of the most interesting and important of governmental functions are entirely unknown in so far as the average citizen is concerned. As an example, how many of the men walking along Nassau street today know that the health department conducts an occupational clinic at 49 Lafayette street, New York city? Furthermore, just how many would recognize what an occupational clinic means?

The fact that the occupational clinic of the Board of Health is the only one of its kind in the world, except for one at Milan, Italy, is something to militate against the charge of gross ignorance on the part of the New Yorker. Much could be written about the work of this important institution, wherein skilled medical men are patiently studying the many diseases directly attributable to certain occupations, and even more could be written of their daily examinations of hundreds of the 200,000 or more food handlers in the city to insure against the transmission of communicable diseases. Does the man or woman dining at any of the many New York hotels and restaurants know that the man or woman serving him has recently received a clean bill of health from the department of health? And is he aware that the baker who has prepared his bread and the chef who has cooked his food have also received official permission to work at that particular occupation?

The medical men of the city know of this work, and its attractive and unusual fields for research and invaluable experience. As a result, the advertisement by the municipal civil service commission of an examination for clinic physician for part-time service will meet with hearty response and result in keen competition for the several vacant positions. The compensation rates proposed by the board of estimate and apportionment for this position are $300 to $600 per annum for not less than six hours per week, or $900 to $1,140 per annum for not less than eighteen hours per week.

Aside from the experience and education connected with the work, the clinic physician is fitting himself for a new phase of medical practice—that of industrial corporation service.

WOULD STANDARDIZE HOSPITALS

State Medical Society of New Jersey Appoints Committee to Study the Problem

At a recent meeting of the New Jersey State Medical Society the following resolution was passed:

Resolved, That a committee of seven members, including three state members representing the American Medical Association, be appointed by the president to study the status of the general hospitals located in the state, which study shall aim for the betterment and standardization of these institutions, and that the state committee be authorized to confer with the national or other established committees organized for this purpose, and shall report at the next annual meeting of this society; and should any circumstances arise to make earlier action desirable, this committee shall report to the councilors of this society, and action be taken in accord with the findings of the councilors.

The following members were appointed: John C. McCoy, chairman; W. Blair Stewart, Alexander Marcy, Jr., Gordon K. Dickinson, Emery Marvel, Henry B. Costill, Thomas N. Gray.

CARE OF ALCOHOLICS IN THE MODERN HOSPITAL

Employers, Police, Magistrates, and Social Agencies Must Help if Problem Is to Be Solved—Proper Medical Treatment Applied to the Cause Must Be Given

By CHARLES B. TOWNS, Charles B. Towns Hospital, New York

THE establishing of this hospital for the specific treatment of drug habits and addictions has opened up an entirely new field in hospital work. Its magnitude has enabled me to study at first hand not only in our own country, but in most foreign countries, the treatment and care of the drug and alcoholic patient.

As the result of my experience, I am in a position to take up this subject and discuss it not only on the broadest medical basis, but from a comprehensive sociological standpoint as well. Not being a medical man, and never having had, in any way whatsoever, any connection or any experience with any other medical institution, this distinctively new type of hospital has been extremely interesting to me; it has been interesting, indeed, to observe the evolution which has carried my work to its successful development.

It surprises me to note how little the drug and alcoholic patient is understood by the medical world as a whole. This is no reflection, however, on the medical profession. They have had few means of studying this type of patient from a clinical standpoint; in many cases they have had none at all; and there is nothing in their medical education to give them any knowledge whatsoever of this medical problem. I have never yet been able to overcome the surprises which have come to me in finding that my lack of knowledge of medicine has enabled me to establish so many precedents in connection with this work and in dealing with the various phases of this subject.

The alcoholic is everywhere regarded as a disgrace. No one anywhere believes that any medical—or, indeed, any other—consideration should be shown him. He is not considered as a sick man, or treated as one; and, although he is, in one way or another, an enormous medical and sociological problem, I have been unable to find anyone anywhere who has attempted to get at the cause of his being such, or who fully appreciates the full proportions of this gigantic problem.

It is part of my makeup to get at causes. It has never made any difference to me whether I was breaking a mule on a farm, struggling with some problem in an accounting house, or in a quandary over some difficulty that has arisen in my present work, no matter where I was or what I was doing, I have always wanted to know the whys and wherefores and to get at the causes. This has enabled me in my hospital work to proceed from the standpoint not only of treating the sick of this class, but of trying as well to avoid the unfavorable consequences that grow out of the lack of proper treatment and care of this type of patient.

I have written and said a great deal on this subject, but from time to time I am going to say a great deal more; and I am going to keep hammering at state and municipal authorities all over this country until I put them all to thinking on this subject. And when they do begin to take up this problem with the seriousness it demands, it will mean that one of the biggest economic wastes that this country has had to deal with is in a fair way to be reduced, for the first time, to a minimum.

It is unfortunate that the medical superintendents of our big hospitals are necessarily so involved with the thousand and one daily details of their work that it is impossible for them to take up a subject of this kind and give it the serious consideration it should have. This problem seems to be looked on as unavoidable, and it seems to be supposed that there is no way of correcting it intelligently. In fact, I find that, almost without a single exception, the general practice has been merely to make a requisition for more room when the ward, or the number of beds, set aside for this type of patient became crowded.

I need not point out that this is not an attempt to treat drug and alcoholic patients, but a merely mechanical way of handling them—merely "tapering off" drug patients or "sobering up" alcoholics. In this connection I would say that the problem involves not only the receiving of this type of patients in the big institutions, but the lack of proper treatment and care of these unfortunates as well after they have been admitted. In one way or another this is felt in many branches of hospital work.

It may surprise some of my readers when I make the statement that there is no more medical intelligence being exercised in hospitals today for the alcoholic—so far as I have been able to learn—than there was one hundred years ago. There is the same lack of classification; there is no definite medical treatment. We find the same conditions existing in the courts of law. The alcoholic is either penalized by a fine, reprimanded, and dismissed with a threat, or disgraced through being subjected to a short term of imprisonment among the lowest types of human beings. There is nothing being done really, either sociologically or

medically, to set up a standard by which this class of patients can be intelligently judged; whereas something constructive ought to be, and can be, and must be, done to put those who are really worth while squarely on their feet and to find employment for them.

When I took up this work in 1901 there was, at that time, a deep-seated belief, not only in the medical world, but among people generally, that if you were to take an alcoholic, put him where he could not get drunk for a reasonable length of time, there would be no excuse, if he lived through this process of deprivation, for this man drinking again; and if he did drink again, he was "no good," and should be treated as a criminal. I cannot begin to tell how strenuously I feel the pathos and the pity, and the ignorance and the stupid blundering inefficiency, of this antiquated way of looking at this problem and of dealing with the alcoholic. To set state and municipal authorities right as to the best ways and means of dealing with the matter is, I feel, one of the most important undertakings my entire work has developed.

When we begin to seek and "show up" the unfavorable conditions that grow out of the lack of intelligent dealing with the alcoholic, the results are seen to be appalling. In this state—that is, in New York—the statistics from the state medical institutions for the care of the insane show that about 65 percent of the commitments have an alcoholic history. Their records show—taking the statements of alcoholics, which, it must be remembered, cannot always be relied on—that about 25 percent have *chronic* alcoholic history. As a matter of fact, the actual percentage is very much greater than that; it is more nearly 35 or 40 percent. This type of patient, once it reaches the insane asylum, is, with few exceptions, practically a life liability to the authorities. We find that there are taken from the alcoholic ward where this type of patient is admitted, and from there distributed in other wards of the general hospital, other complications that have grown out of the lack of definite medical treatment. Such crowded institutions are not getting at causes, as I have stated before, but are simply asking for increased facilities for the more or less permanent housing and boarding of such patients.

In the early part of my work I uncovered some highly interesting facts in connection with the general way of dealing with such cases. I found that the only alcoholic patient who can have delirium tremens is the man who cannot get his customary supply of alcoholic stimulant, or who, by reason of stomachic or other irritation, is unable to retain his alcohol. Again, no alcoholic patient can sleep and have delirium tremens. I found also that in chronic alcoholism one cannot substitute any other form of stimulant for alcohol and avoid delirium tremens.

This work—sixteen years of it under rigid hospital conditions—has proved that where such cases receive definite medical treatment, where they are scientifically treated, the patient cannot and will not develop delirium tremens. There will be, under such treatment, no unfavorable mental condition to deal with; and it makes no difference how much deterioration, both physical and mental, might have set in from excessive alcoholism, none of these cases could ever be classed as insane, nor be accounted eligible for admission to institutions for the care of insane patients.

To demonstrate the difference between "sobering up" such patients by depriving them of their stimulants, and the advantage of getting definite medical results, I will refer to Bellevue. And in referring to Bellevue, it is not that Bellevue, as regards this type of patient, is any worse than any other institution; but, as it receives and dismisses more patients of this type than any other hospital in the world, and as I happen to have an intimate knowledge of the whole situation there, I can, of course, discuss the matter intelligently.

There is no reason why, with the present facilities Bellevue has for the accommodation of such patients, definite medical treatment should not be carried out after classification. Some practical measure should be taken to avoid turning the alcoholic wards of hospitals, such as this, into boarding houses, where any old habitual drunk can come for board and bed when he knows of no other place to go, and where these "old soaks" are permitted to return just as frequently as they choose. The proper treatment of these cases in such institutions would eliminate any further contributions to the insane asylum, and it would also eliminate the necessity of transferring numbers of such patients to other wards in the same hospital.

The accommodations which are now necessary to house and feed those admitted to such wards would decrease materially, and the hospital would not need nearly so much space for such patients. If some system of identification of such patients were established, and certain legal dispositions be made of recurrent cases, it would be only a short time until the old alcoholic "mossbacks" would be eliminated entirely.

It should be possible for those patients who are recognizedly "worth while" to make application to any state or city hospital for treatment. At least 75 percent of such patients would be restored to usefulness and self-maintaining, earning capacity. As it is, none of them is. Definite treatment

and care would illuminate the whole situation, and its effects would be felt widely elsewhere.

Then, too, there are a great many patients who, because they lack funds, cannot afford to go to private institutions for treatment. As the application of definite medical treatment in such cases would require less than five days to one week, one can see how a goodly number of these patients could be treated within the course of a year in any hospital of—say, to begin with—metropolitan size.

The saddest part of all this to me is that, speaking generally, the very medical men who are in charge of this work are not big enough or broad enough to realize the importance of the definite medical treatment and care of this type of patient. They are traveling along in the same old medical rut they have been following ever since medical history began.

As for practical measures, I suggest this: I would like to see the state authorities unite with the municipal authorities in this matter; they could begin with the employer by trying first to save the man who has a job, but will lose it unless he stops drink; educate the employer as to his responsibility in trying to save such a man. You will find him quick to respond to your effort to help his employee.

Then include the police department, the city magistrate, and all social organizations that have to do with this type of patient. Get them together and show them all by demonstration of the definite medical treatment in your own hospital; say that it is now possible to unpoison these alcoholics, set them free from their physiological craving, and put them in condition to be dealt with sociologically. This work should be carried to a definite conclusion, both medical and sociological. It can be done and it is going to be done, and I am going to do what I can to have it done.

I will be very glad to give any medical findings in detail to the heads of all hospitals who have to do with this type of patient. I would like them to know that I will be only too glad to answer inquiries or correspondence on this subject from time to time, and I want them to feel that they may count on me to help in any and every way possible to solve—and to solve aright—this problem that I have elsewhere called "The Unlimited Problem."

The Bend Surgical Hospital is the name of a new institution soon to be opened at Bend, Ore., by Dr. J. C. Vandevert and R. L. Edwards. A building containing nine private rooms, two wards, a modern operating room, etc., is about completed.

Mrs. Ella Green Davis, for many years superintendent of the Owensboro City Hospital, Owensboro, Ky., has tendered her resignation to the hospital board.

GREAT MEDICAL CENTER FOR CHICAGO

University of Chicago, Rush Medical School, and Presbyterian Hospital to Be Nucleus for $10,000,000 Institution

In step with the modern idea of foundations and endowments for philanthropic purposes, the University of Chicago and Rush Medical School have just closed an agreement by which a great medical center is to be built up in Chicago.

While the plans are yet in the making, it is generally understood that there is to be a great medical school built on the Midway as a part of the group of the University of Chicago buildings; the university is to give the scientific part of the education of medical students—viz., the first two years—and the medical school is to finish the course. It is understood that the Presbyterian Hospital is brought into the combination for purposes of internship and clinical training of students, and no doubt the County Hospital and probably several other similar institutions will lend themselves as a part of this great aggregation.

It is understood that one of the chief features of the new medical center is to be a post-graduate school, and the sponsors for the movement hope that in time they may build up the world's greatest medical center in the Middle West of the United States. The Rockefellers and the Rockefeller Foundation are to contribute approximately $2,000,000, with the understanding that the people of Chicago contribute $3,000,000 more; of this $3,000,000, $700,000 has been raised, and Mr. Julius Rosenwald has given another $500,000. The sponsors for the movement see approximately $5,000,000 more that can be added to the endowment, so that within a short time there is no reason to doubt that the new foundation will sum up a magnificent total of $10,000,000. Such a combination, with such an aggregation of capital, ought to make a most profound impression on medical science.

A movement has been launched at Minneapolis, which, if successful, will result in the erection of a group of hospital buildings for the University of Minnesota Hospital requiring an expenditure of 1,500,000 and tripling the capacity of the institution. The plan is to raise the necessary funds by private subscription. Back of the movement is said to be a desire on the part of the university authorities to attract to the faculty of the Minnesota school men of reputation in medicine, to whom the salaries now paid by the state are no inducement. According to the new plan the proposed new buildings would offer hospital accommodations for private patients of "all-time" professors in the university. The University of Minnesota Hospital now houses about 200 patients.

An organization of negroes in Pittsburg, Pa., has filed application for a charter for an institution to be known as the Livingstone Memorial Hospital. The erection of a building to cost $150,000 is planned, and the undertaking is said to have support from a number of wealthy white residents of the city. The purpose is to establish a hospital which will be devoted primarily to the treatment and care of negro patients. The plan provides that both the medical and nursing staffs shall be composed of negroes, and includes the creation of a training school for negro nurses.

The hospital reported in these columns last month to be erected at Charleston, S. C., by the South Carolina Medical Society, a local organization, is to take the place of the present Riverside Infirmary, the old quarters of which will be converted into an administration building. The new structure is made possible by a bequest of $85,000 from Mrs. Thompson, a wealthy resident of Charleston, and will be known as the Joseph Thompson Memorial. It will have a capacity of 42 beds, according to plans now being drawn by Architects Todd, Simons & Todd.

The MODERN HOSPITAL

Editorial Office . . . 6 North Michigan Ave., Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd . . . . . Fidelity Building, Baltimore
Frederic A. Washburn . Mass. General Hospital, Boston
Winford H. Smith . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater . . . . Mt. Sinai Hospital, New York
W. L. Babcock . . . . . Grace Hospital, Detroit
John A. Hornsby . . 6 North Michigan Ave., Chicago

SUBSCRIPTION.

Under domestic postage, $3.00; foreign postage, $3.50 (14 Shillings). Single copies 35 cents.

Domestic rates include United States, Cuba, Mexico, Porto Rico, Canal Zone, Hawaii and Philippines.

Contributors, subscribers, and readers will find important information on advertising page 34.

Before and After—The Hospital

Hospital administrators and those who are interested in the welfare and progress of the modern hospital as a social factor are all but unanimously agreed that the care of the sick within the walls of the institution is only one of the modern hospital's problems, and that the hospital should be and is a rallying point in the community about which centers all the health activities of the community.

Perhaps the most important of these activities concern incipient disease and, with a chasm in between, the convalescence of the sick after the hospital days are over.

We are hearing very much these days about the lack of hospital beds, and there is no doubt that, if we are to realize some of the ideals of those who believe that this is a hospital era, very many more hospital beds are to be instituted than we have at present. But it seems to us that a far more important thing than the addition of hospital beds, just at this moment, is the utilization of all the resources at our command to (1) prevent disease, and (2) hurry into renewed health and productivity those who have been the victims of disease.

If the hospital is a social health center and the guiding star of the community in matters concerning the health, then its first duty is to prevent disease in so far as possible. Of course, the best way to do this is to educate the people concerning their habits of life, sanitation, hygiene, and the like; but this is only possible within very narrow limits, and the next best thing to do is to catch disease in its incipiency and to head it off, so that its victims need not be applicants for hospital beds, and that they can remain in their homes and get over their troubles rapidly. The next thing to do is to bring hospital patients to the end of their disease as quickly as possible and back to full health and productivity, and to do it in such a way that they will not again be afflicted with the same disease or with a return of it.

We cannot head off disease in our dispensaries and out-patient departments unless these are far more efficient than they have been in the past. The ambition on the part of dispensary physicians to hurry through as many cases as possible in a given number of minutes or hours leads to inefficient diagnosis and even more inefficient treatment, and this is what has created suspicion in the minds of those who are compelled to go to our dispensaries for lack of money to pay a doctor.

We have got to make better diagnosis of incipient disease in our dispensaries, and we have got to apply far more efficient treatment. Many of us will recall the case or cases in the Massachusetts General Hospital, a year or two ago, in which one after another member of a family of nine people were afflicted with scabies, and, as each one was cured of the trouble, another became infected, and so this went on for a year or more, and at the end of that time the out-patient nurse took the matter in hand and hired an ablebodied scrub woman, went into the home and cleaned up the whole family at one time, and also cleaned and disinfected the premises. During the year's progress of the disease in this family approximately $128 were expended for dispensary service and visiting nursing. The disease was finally eradicated at an expenditure of approximately $3. This is perhaps the most illuminating example of what the dispensary was not and what it can be made to be. Hospitals had better think about their dispensary and out-patient service in the light of these suggestions.

Then about convalescence. It costs a good deal of money to keep patients in a hospital in town, with a great amount of nursing for bed patients and with all overhead expenses of running a modern institution. We had better think about getting our sick people out of these expensive hospitals, and into homes of some sort in the country, where they can be maintained at a lower cost and where they will have at hand the auxiliaries of a prompt cure—viz., better air, more sunshine,

fresh vegetables and fruit, and eggs and milk. The hospital that has the money and can afford to organize a country branch had better do so, and that branch should have enough tillable land about it for farming purposes. It could easily happen that a country branch could contribute largely to the supplies of the city institution, and in many cases some of the patients could be impressed for some work on the farm, not only to the advantage of the organization financially, but for their own best good, physically and mentally.

These are not theories; they are practical everyday principles underlying the modern attitude toward the sick and toward the vast and growing expenditures for hospital purposes.

The National Safety Council

A man once met a small lad staggering along the road under the heavy burden of carrying a smaller boy, who was unable to walk. The man said to him, "Is he not too heavy for you to carry?" "Oh, no," said the lad, "he is not heavy; you see, he is my brother."

This story truly illustrates the aims and objects of the National Safety Council. The chief aim of hospitals is to cure the sick and save the lives of the injured. Their second most important function is educational, notably in training the members of the medical and nursing professions and teaching public sanitation. Through the development of hospital social service work and many auxiliary agencies, the hospital is rapidly becoming a leader in preventive medicine. The circle of its influence is radiating wider and wider, and the hospital field is developing points of contact and cooperative agencies innumerable. One of the important coworking agencies is the National Safety Council, whose fifth annual Safety Congress was held in Detroit the week ending October 18. This council stands closer to preventive medicine in a practical way than any other national educational body. When the millennium, for which it aims, is reached, few hospitals will be needed and industrial safety will be an assured fact.

The field of work covered by the council knows no geographical limitations, encompasses all occupations, and reaches every activity of industrial and social life. The program of this congress is so varied and its recommendations so practical in application, that its work has attracted universal attention. The various section meetings covered subjects pertaining to public utilities, mining, iron and steel foundry work, transportation facilities, chemical and dye industries, mines and mining signals, railroad crossings; electrical, textile, paper, and automobile industries; elevators, cotton mills, logging and lumbering, cement industry, marine and fire hazards; civic and national problems, such as accident prevention, universal danger signs, protection of the eyes in industries, use of alcohol by mechanics, accident statistics, signal systems, compensation and health laws and insurance, first aid service, occupational diseases, factory sanitation, physical examination of employees, prevention of infection, industrial nurse work, industrial welfare work, industrial hospitals and dispensaries, medical and dental work in the industries, industrial hygiene, health hazards, benefit associations, and federal standardization of accident records, safety regulations, and danger signs. The mere mention of these pregnant headings illustrates the universality of the field covered by the congress.

The membership of the council is composed of managers and heads of the great industrial plants and institutions of the country. Much stress during the congress was laid on accident prevention in the various industries and on the use or nonuse of alcohol by industrial workers, which latter subject was heavily featured by the newspapers.

The appointment of a committee at the recent meeting of the American Hospital Association to study the subject of health insurance in its relation to hospitals was opportune in view of the exceeding importance attributed to health insurance on the part of the industrial captains who discussed several papers on this and allied subjects before the health service section. State-controlled health insurance is a rapidly developing feature of our social progress, and hospitals should be prepared to meet the obligations connected with it. An interesting section was devoted to the study of governmental problems leading toward the federal standardization of safety regulations, danger signs, accident records, etc.

The commercial exhibit, which filled the main floor of the largest hall in Detroit, was a highly interesting feature of the congress and attracted great attention. Stimulation to greater achievement and higher industrial and social levels must necessarily be reached because of this congress.

W. L. BABCOCK.

Autopsies in Small Hospitals

Just because a hospital happens to be small and the number of its patients limited is no reason why the work done in it should not be just as good as in a larger and more elaborately equipped institution having a much greater number of patients. The only way that a small hospital can be heard in the great world of science is for it to do things,

and to do them in such a way that they will attract attention even in competition with the greater volume of work being done elsewhere.

Just now we are thinking about autopsies in small hospitals. Dr. Winternitz, in his paper on this subject, read before the American Hospital Association, makes a striking point in the statement that the percentage of autopsies in a hospital is a fair indication of the quality of work being done in the institution. That seems to us an excellent point. If a medical staff is eager and ambitious, it is pretty certain that the administration of a hospital will back up the staff in its anxiety to have as much data as possible on the work it is doing, and there is no data so valuable to a medical man, or to a staff, or to the profession, as autopsy data.

It is true that not very many people die in small hospitals, because the total number of their patients is small, but it seems to us that, in proportion as the number is small and the opportunities limited, so these ought to be taken advantage of. As a matter of fact, one rarely hears about autopsies made in small hospitals, and rare indeed is the unusual involved and obscure case reported out of the small hospital on the autopsy findings.

A lesson from the Mayo clinic ought to be taken to heart by small hospitals. There was a time in the career of Drs. Wm. J. and Chas. H. Mayo when the patients at Rochester were few and far between, but these men made up in the quality of their work, even in that early day, for its lack of quantity, and the first attention that they received from the world of science at large was due to the thoroughness and care that they gave to the few patients they had. If there was a case of goiter, and the patient was operated upon and died, the report of that case, so thorough was it, attracted the attention of medical men who had other cases of like character, and some of these were sent to the Mayos. Presently tens of cases of goiter could be reported, and these in turn brought hundreds of others, and it was not long before the Mayos could report a thousand goiters —but always with the same care and thoroughness as to the work done. A great deal has been said about the methods that have achieved greatness for the Mayo clinic, but in a final analysis this is precisely what built that great institution —viz., the thoroughness of all the work done, both in reporting the case or cases and in the compilation of the literature on other cases of like character. This same thing can be done in any small hospital in this country if the ambition and the hunger for knowledge is there.

Just now the American Association for the Study of Cancer is asking the medical profession and all the hospitals of the country to report their cases, and a recently appointed president's advisory board on first aid and similar hospital and dispensary services is sending out a questionnaire as to certain kinds of work done in hospitals. These are opportunities for medical men in small hospitals to get themselves and their institutions into the spotlight, and they should take advantage of the opportunities.

Standardized First Aid in the Hospital

One of the great complaints of surgical hospitals, particularly those engaged in emergency work, is the bad condition in which injuries are received, the damage being already irrevocably done before the patient is admitted. THE MODERN HOSPITAL hopes that the president's Board on First Aid Standardization will be able to so inculcate the lesson of preventive surgery into the mind of the general public that this condition will, in a measure at least, be controlled.

The American First Aid Conference convened at Washington on August 24, 1915, largely as the result of the work of Dr. Joseph Colt Bloodgood, of Baltimore, Md., and recommended to President Wilson that he appoint a board for the purpose of deliberating carefully on first-aid methods, packages, equipment, and instruction, and recommending a standard for each to a subsequent session of the conference. This conference was composed of some of the leading industrial surgeons in the country, as well as officers from the army, navy, and public health service. The president thought well of this scheme of placing first aid in America on a standard basis both for peace and for war, and appointed the following board: Dr. Richard H. Harte; Colonel Louis A. LaGarde, M. C., U. S. A.; Assistant Surgeon General W. C. Rucker, U. S. P. H. S.; Dr. J. P. Kaster; Dr. Samuel C. Plummer; Surgeon A. M. Fauntleroy, U. S. N.; Dr. J. Shelton Horsley; Major R. U. Patterson, M. C., U. S. A. Subsequently Congress appropriated the sum of $2,000, to be used by the Bureau of Labor Statistics in cooperation with the board, whose existence was legalized by the Sundry Civil Act of 1916. The board is now engaged in collecting expert opinions from a selected group of surgeons throughout the United States, and a questionnaire covering the moot points of first aid is being sent to those who have volunteered to do the work, which is inevitably incident to answering these questions. As soon as the data has been collected and digested, it is planned that the board shall issue a report which shall be technical in nature, this to be followed by a handbook to be distributed throughout the nation. This

is in reality a part of the medicomilitary preparedness scheme, but has the double advantage of preparation for peace quite as much as for war.

W. C. RUCKER,

Secretary of the President's Board on First Aid Standardization.

The Newer Hospital Service

It is the duty of every hospital superintendent in this country to acquaint himself thoroughly with the laws of his state concerning hospital practice and hospital methods. Due to the activities of the Association for Labor Legislation, the legislators of almost every state are passing laws, at almost every session, in some way involving hospital service. Some of these laws are not in the best interests of the hospitals, but far more of them are in step with the general progress of the country in the care and treatment of the sick, and in the applications of our common humanitarian principles. A knowledge of these laws will very often be of great advantage to hospitals, as, for instance, the workmen's compensation law and the sick insurance benefits. Some laws are exact in their requirements, and they specify details to such an extent that the hospital administrator who does not know the exact reading of the law may lose much money for his institution.

Any hospital administrator can write to the secretary of state at his state capital and secure a copy of the laws that bear on hospital service, and he should lose no time in doing so. Most hospital boards have an attorney, and this attorney should see to it that a copy of all the laws having to do with hospitals and their service is in the hands of the superintendent. These laws are usually compiled in small leaflets, and they should be bound, their context borne in mind, and these bound laws kept on the superintendent's desk for ready reference.

The Small Community Hospital

Dr. Hornsby's continued story of "The Small Community Hospital" is unavoidably crowded out of this issue. In January Dr. Hornsby will take up the equipment of his "Small Hospital," and will undertake to give all the items, even down to the pins and needles, that make up such an equipment.

The cornerstone of a large hospital building being erected at Hart street and Stuyvesant avenue, Brooklyn, N. Y., by the Beth Moses Hospital Society, was laid Thanksgiving week. The building is to be a modern fireproof structure five stories high, with a capacity of at least 100 beds. The names of Isaac Levin, David Werbelowsky, John Sklar, Israel Rokeach, and Morris Robinson are among those prominently identified with the society.

Margaret Teresa O'Donovan, Nurse

BY FATHER HENRY B. TIERNEY, Trenton, Mo.

THE beautiful theme of this whimsical verse
Is Margaret Teresa O'Donovan, nurse;
There's a lilt in her laughter, a joy in her smile,
She's a bright bit of sunshine from Emerald Isle;
When she speaks, all the shadows of sorrow disperse,
God bless you, Tessy O'Donovan, nurse.

Like a flood of God's light when you open the door,
His sunshine enshrines you, Tessy, asthore;
Your heart is as true as your laughter, I know,
May angels go with you wherever you go;
'Tis a joy to be writing of you in my verse,
Margaret Teresa O'Donovan, nurse.

You ask how I am; sure I think I am worse
For the want of a smile of a sweet Irish nurse;
Faith, the world is so full of false notes, anyhow,
That your voice is the music I'm treasuring now;
You come like the morning, my pains to disperse,
May the Savior be good to my fair Irish nurse.

The patient not cured at the end of a week
Who basked in your smiles and each day heard you speak,
Is dead and don't know that he needs a black hearse;
To resist your dear wiles is self-murder, or worse;
Then here's to the hospital girl of my verse,
Margaret Teresa O'Donovan, nurse.

The light of old Ireland enkindles your eyes,
Her hawthorns, her roses, her smiles and her sighs,
The peace of her valleys, the smell of her sod,
The love of her people, the faith of her God,
Crimson your cheeks and all shadows disperse,
A sunbeam from Erin is Teresa, the nurse.

When, true to the faith of your mother, asthore,
You kneel down at night the great God to adore,
Will you offer a bit of a prayer for me?
Sure, I'll oft think of you at God's altar, machree;
Then goodby, mavourneen, I'm ending my verse
In praise of sweet Tessy O'Donovan, nurse.

The Lutherans of New York city opened a large, new hospital at Convent avenue and One Hundred and Forty-fourth street on October 30. The institution, which will be known as the Lutheran Hospital of Manhattan, is the outgrowth of the Lutheran Inner Mission Society, and received its charter and the approval of the State Board of Charities in 1911. A successful district medical service has been maintained for several years. In 1912, by the will of the late Dr. Inslee H. Berry, the hospital association received Dr. Berry's entire residuary estate. This and other benefactions have made possible the modern building now in use, every appointment of which is said to be in accord with the latest requirements of hospital science.

A number of persons, variously reported at eleven to nineteen, and including both adults and children, lost their lives in a fire which destroyed St. Elizabeth's Hospital at Farnham, Quebec, October 26. The fire occurred early in the morning when most of the patients were asleep. There were more than 300 persons in the buildings burned, one of the structures being used for the housing of school children. A number of these children were badly injured by jumping from windows to stone pavements. A defective chimney is believed to have been the cause of the fire. The institution was managed by the Grey Nuns, many of whom, it is said, risked their lives in efforts to save patients and children from the flames.

Articles of incorporation have been filed by Carl Beyer, H. R. Tribble, and Louis Sipkins, of Minneapolis, for an institution to be known as the Loring Park Sanatorium. The capital stock will be $50,000.

Excavation has been started at Anamosa, Ia., for a $20,000 addition to the Mercy Hospital of that place.

HOSPITAL, MEDICAL, AND SPECIAL MEETINGS

AMERICAN HOSPITAL ASSOCIATION

* * *

Official Bulletin for December—Issued by the Officers of the Association

PROCEEDINGS OF THE EIGHTEENTH ANNUAL CONVENTION

Compilation of the proceedings of the eighteenth annual convention is progressing, and the books will be mailed to members at a much earlier date than heretofore. Authors and others who may desire reprints of papers read at the convention are requested to file their orders with the secretary at an early date. The price of reprints will depend on the number wanted and binding specified.

TRUSTEES' MEETING

A meeting of the trustees is scheduled to be held during the month of November, at which time many questions of vital interest to the association will be acted on. Items of interest to members will be duly reported in these columns.

EMPLOYMENT BUREAU

As rapidly as developments will warrant, an active agency will be inaugurated for the placing of competent superintendents, assistants, housekeepers, dietitians, special nurses, etc. The growth and utility of this undertaking will be entirely dependent on the cooperation of the members of the association. The secretary will keep in close touch with all organizations that may require the services of experienced executives or other minor positions that can be filled from our membership, to which the services of the bureau will be confined. You can assist this much-needed innovation by reporting to the secretary the names of those who are available and by communicating your own wants to this office.

MEMBERSHIP

Attention is invited to the provision of the revised constitution and bylaws in respect to membership in the association. Trustees, superintendents, assistant superintendents, or members of medical staffs of hospitals are all eligible to active membership, the dues being $5 per annum or $50 for life. Heads of any executive, administrative, or educational department, contributors or members of any association or board, the object of which is the foundation, maintenance, or improvement of hospitals or the promotion of organized charities for the improvement of health, may become associate members, the dues being $2 per annum or $25 for life.

Now that the gates are open for many who hitherto could not join the association, it is hopefully predicted that every member of the association will become a committee of one for the purpose of increasing membership. The power and influence of the association will be increased in direct proportion to the number and quality of its membership.

There is a large, fertile field from which we can, if we will, recruit new members, men and women who have plodded along for many years unassumingly and unpretentiously, accomplishing great things and continually acquiring new knowledge from the potential academy of life; they have been willing and ready listeners, adapting to their own uses what they have seen and heard. We want these people on our rolls, for ofttimes those who are the most learned are the most modest of all—the readiest to admit their ignorance and the first to listen. Each one of us can help the association by adding his or her stock of definite accurate knowledge to the small stock now available, for, after all, we are like the muskrat in Kipling's jungle tale, who was "full of stories half heard and very badly told."

HOSPITAL CENSUS

To assist in correcting the membership list and for the purpose of surveying the hospital field as a preliminary move prior to our campaign for new members, the secretary desires copies of every hospital's annual report in the United States, Canada, Mexico, and South America, and will feel duly grateful to members and others who will assist us in this undertaking. Send your own report at once, and then endeavor to procure those of other hospitals not represented in the association.

COMMERCIAL EXHIBIT

The great majority of exhibitors who participated in the Philadelphia convention were highly gratified by the attendance and the amount of business transacted; a few, however, were dissatisfied, and not without reason, since little or no attention was given them by the members.

Every effort was made by the local committee to impress on members the fact that the exhibits were not for the sole fulfillment of a trade purpose, and that those who inspected them would not be unduly urged to buy. Visitors are free to examine every article shown; they may ask questions, make suggestions, and study at their leisure the advantages to be derived from a combination of science and industry as applied to the manufacture of the implements of precision and the complex machinery, equipment, and supplies so necessary to the successful management of the modern hospital. You will find the exhibitors to be, in every sense of the word, gentlemen—always ready to advise, help, and cooperate; they will take orders for goods if you offer them, for this is their business; but they expect to get your good-will and at least a few minutes of your attention. We ask you, therefore, to spend a little more time next year in the commercial exhibit, for by so doing you are broadening your own education, and you may, perhaps, discover something that will be of inestimable value to your hospital.

SECTIONAL ORGANIZATIONS

On many occasions the association has placed itself on record as favoring the formation of local organizations for the improvement of local conditions, and such bodies of active and enthusiastic workers have accomplished much in their own particular field. The American Hospital Association, however, through its large membership and wide geographical distribution, should, in a sense, be considered the parent organization, and should receive the loyal support and cooperation of all hospital people, regardless of local or sectional affiliation. We, therefore, make a special appeal to all state, territorial, sectional, municipal, or other associations of hospital workers to urge and encourage their members to join the American Hospital Association. The association needs the aid of everyone who is eligible for membership. On the other hand, we believe that everyone engaged in hospital work can profit from the advantage of association with others engaged in a

similar work. It is amazing how narrow and archaic a circumscribed community will become if deprived of free communication with other sections and peoples, and this is more markedly true as regards hospital work, which has undergone almost a revolution during the last decade. However valuable may be your deliberations with those of your own locality, you must go beyond that to learn of the progress of others, and it is for the coordination of this universal knowledge that the American Hospital Association serves us all.

For Hospital Standardization[1]

BY JOHN G. BOWMAN, Director of the American College of Surgeons.

On behalf of the American College of Surgeons permit me to say, right at the start, that we have accepted, with great seriousness, your kind invitation to meet with you today. In many essentials the aims of the American Hospital Association and of the American College of Surgeons are one and the same. We hope that our interchange and discussion today will be of lasting importance. We have in common a vast complexity of good intentions, and to talk them over together now and then is wise. More than this, we hope that this occasion will mean that we, as two powerful groups, shall work together, and that, by good team-work, we shall make a larger measure of our good intentions come true.

In order, now, that we think straight across the fields wherein our common purposes lie, let me review briefly the expressed purpose both of your association and of the college. By your constitution you emphasize your aims toward the "promotion, economy, and efficiency in hospital management." You are concerned with hospital construction, with finances and economics, with national and state legislation, and with systems of accounting. You are concerned, also, with medical organization and medical education, with the training of nurses, and with out-patient work. In the last analysis all of this means that your energies go toward the proper care of sick people, and also toward the prevention of disease.

The College of Surgeons, on the other hand, is an association of 3,500 surgeons of the United States and of Canada. It is an infant among medical societies; but I trust that I may say with due modesty that your success and ours are closely related, and that in the last analysis the beginning and the end of the College of Surgeons is the proper care of sick people, especially as they may be in need of surgical service, and also the prevention of disease. Our common meeting grounds are wide.

But, more specifically, what is the college? It is an association pledged to the most idealistic program ever expressed in any profession. Its program includes the elevation of standards of medicine, moral as well as intellectual. It is a guarantee of no indefinite sort to the public of honest and competent surgery. It is an association to encourage scientific advance in medicine and surgery. It is a national force to put an end to guesswork in diagnosis, to put an end to unnecessary operating, and to blot out the vicious practice known as the division of fees. Better, probably, than any group of men and women who gather themselves together in this country, you know the extent of these evils and of the unnecessary pain and death that trail in their wake.

Just a word here about fee-splitting. You know what it is, and you know that any doctor guilty of this practice is, under the most sacred relations which exist among men, both a liar and a thief. Milder terms are inadequate. More than any other one factor, this practice is responsible for unnecessary operating and for operations by incompetent surgeons.

In the old-fashioned way now of a heart-to-heart talk, let us ask ourselves some questions: What headway are we actually making toward the better practice of medicine? Are we satisfied with our efforts? How often in the struggle does the blood rush to our finger-tips?

About a month ago, near Nashville, I visited the Hermitage, which is the old plantation of Andrew Jackson. My friend who was showing me about the estate told me that Andrew, at his death, left a slave by the name of Alfred. Alfred lived many years about the place. One day he was asked if he "reckoned" that the general went to heaven. "I dunno, suh," he replied; "he did if he wanted to." This is the philosophy which stirs me more than any other. We can do things if we want to. We can bring ideals down out of heaven if we want to, and make them live in any community or in any hospital. The difficult thing is to want to, and to put the want into incisive action.

There is a social law which operates unconsciously among us to the effect that as our organization in society becomes more and more complex, our individual freedom of action decreases. We attain freedom under this process, but not of the barbaric variety. It is freedom in conformity to law. And with these changes comes an increasing tendency that our ways become fixed. The fact is we are born into a society whose customs we accept as a child accepts the atmosphere it breathes. Increasingly we look on the man with suspicion who would change our ways, and especially is this true in hospital organizations where the routine from cellar to garret is sharply defined. In fact, hospital folk scarcely have their equal in this country for their conservatism. For example, less than two years ago there was a hospital superintendent in the Southwest who went from room to room each morning with a little pot of burning tar on the end of a wire. He was fumigating the rooms. Physicians and surgeons protested that at this date there were better ways of fumigation. But the hospital superintendent had always fumigated in this fashion, and it was only with a pathetic wrench of his conscience that he finally gave up the established custom. In another hospital of approximately 200 beds the leading surgeon recently explained to me that they had always got along very well without case histories of any description. "Why," he asked, "should we disturb our success now by introducing this new stuff?" Again, from one coast to the other today many hospital trustees are sitting quietly by, allowing surgical operations to be performed in their respective hospitals after the merest guesswork in diagnosis. They defend themselves in this matter with the feeble statement that such procedure has always been the custom. Any hospital trustee or hospital superintendent today who sits quietly by and allows obviously incompetent work to go unquestioned, or who tolerates the division of fees, is unworthy of his trust.

I do not mean to infer that the motives in any instance cited are wrong. The point is that we are bound in our philosophy, in our life policies, in our conception of right or rights, and even in our religion, by the customs into which, without our consent, we were cast. Only by degrees and through genuine leadership and new economic demands do we change our established customs.

In a more primitive society, when the established ways of the folk became intolerable, a revolution ensued. Then the ways were changed. In these more modern times we are less harsh and less emphatic. We steer clear of revo-

[1] An address before the eighteenth annual conference of American Hospital Association, Philadelphia, September 26-29, 1916.

lution; we use perhaps greater intelligence. Our progress is characterized by progressive development.

My purpose now is to ask you to free yourselves, for a little while at least, from the bonds of custom and to ask you to agree with me, in so far as you will, on a program of activity for the better welfare of those whose care is intrusted to us. Our business is to know what we want to do and then fearlessly to do it.

Since the early days of the organization of the college it has been evident to the regents of the college that they must necessarily acquire accurate data with regard to the hospitals of this continent if they are to administer the college effectively and with fairness. Just a word further, now, in explanation of this matter. The College of Surgeons is an organization to which are admitted surgeons who are honest and who have proved themselves qualified in surgery. But what does it mean to be qualified in surgery? It is a fair statement, I believe, to say that 80 percent of the knowledge used by the surgeon in his practice he acquires during his internship and his assistantship in a good hospital. An educational function has been forced on the hospitals almost without their realization. As an administrative necessity, the College of Surgeons is interested to know what training the hospitals exact of the young doctors in their service during this period. A tentative outline of this problem has already been issued by the college and is in your hands. Beyond question, there is benefit to be had, both by yourselves and by the college, if together we take up this subject and go to the bottom of it. This is part of the task to which we must address ourselves if we are ever individually to express in our work our true personal equations.

Many other subjects within our common fields of activity call for similar treatment. For example, what is the right procedure in the management of a hospital? This question calls for a specific answer as to the duties of a board of trustees, of a superintendent, and of a hospital staff. Again, in a hospital, let us say of 100 beds in a small city, what are the laboratory facilities and the equipment requisite for the adequate care of patients? What is the responsibility of such a hospital to the entire local profession and to the community? Is the staff to be "open" or "closed?" These, among many others, are the perplexing problems on which we should turn our clearest moments of thought, and which we should, by exhaustive study, solve. Our request is that we solve such problems together.

During the next three years the college has planned to spend at least $20,000 a year in the study of such problems as I have mentioned. The college takes up this work, asking the good will and cooperation of all concerned. It pledges itself to proceed in a kindly and sympathetic spirit, to be helpful always rather than critical. On the other hand, the program would be quite ineffective if it were not carried out in a sound and scholarly way. The first step is to obtain accurate data, and then to marshal these data fearlessly into a simple, comprehensible, and useful form. Such a series of studies, I am confident, will serve as a powerful lever for the advance of our purposes. It will serve as a bond by which each of us may accomplish greater ends than is possible single-handed.

On behalf of the regents of the college, I am authorized to ask the American Hospital Association to appoint a committee to cooperate with the college in this proposed series of studies. The regents ask that this committee advise with them from time to time as to the most useful fields of investigation, ways of procedure, and distribution of the published studies. The Carnegie Corporation has kindly agreed to contribute $30,000 toward this work.

There is one other matter which I beg, with all kindness, to mention. It is fundamental to the success of the entire program. In many a community today the medical profession is engaged in undue rivalry and jealousies. Local groups of doctors are divided into little cliques, which indulge in unkind or bitter criticisms of one another. Such a condition, where it exists, defeats the public support to which the men are really entitled; it defeats the spirit of progress. Not infrequently officers of hospitals are drawn into this petty quarreling. Now, all of this we can stop if we want to stop it. A southern evangelist used to thrill his audience by saying, "Quit your meanness. How are you going to quit it? Why, just quit it." We need to be happy twenty-four hours a day, and in our hearts to understand that days of happiness are the days which make us wise. Do you ever consider how changed a place your hospital would be if everybody in it began work every morning having forgiven everybody everything? In closing I venture to say that such a hospital would never have a serious financial problem to meet, and that the death rate would go down where it belongs.

Hospital Accounting and Finances[1]

BY DR. A. R. WARNER, Superintendent Lakeside Hospital, Cleveland, Ohio.

Hospital accounting is more than ordinary business accounting. In addition to the figures presenting the detail of all cash transactions, as well as store figures and groups of figures representing net costs, there must be a report to philanthropy—to society—for the administration of funds pledged for the betterment of mankind. A factory or business has its output and its loss and gain accounts to compare with and to interpret the routine figures, but the output of the hospital is dissipated into many channels without a common denominator or a satisfactory basis for financial comparison. The ward patients are usually the greater part of the expense, but dispensary work and emergency patients are often a considerable factor. Laboratories of all kinds and research work and workers are, however, claiming a progressively greater portion of a hospital's available funds. The training of nurses and the post-graduate training of medical students are necessarily and wholly hospital problems, and the responsibility for the quality of our future clinical medical profession, as well as that of the nursing profession, with the attendant expense, rests squarely on hospitals. Well-trained men and women are as legitimate an output of a hospital as days of treatment, and may in the end prove the better investment for society. All this makes it extremely difficult to measure the output of an institution or to compare this output with the cost.

Society has in the past regarded hospitals as charities, and the sole requisite of the management was that it must be satisfactory to the contributors; but society is coming to realize that hospitals are institutions necessary for its existence—to be promoted, conserved, and managed as any other necessity—and hospital administrators are becoming very familiar with the word "efficiency." Trustees and practical philanthropists are now asking pointed questions about particular institutions and public health institutions in general.

No attempts to evaluate the worth of hospital service to society, and thereby to answer the questions directly, have been made. All who have seriously attempted the indirect method of measurement by comparison with other hospi-

[1]Read before the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

tals of good repute have come to realize the impossibility at the present time of comparing institutions, even in a broad way, by deductions made from published financial and statistical reports.

Although uniform hospital accounting is a term very familiar to us all, it has never been, even to a small degree, realized. It has been an almost universal custom, when a hospital's accounting system was questioned or disapproved, to employ the services of a local accountant, well trained—usually well trained in business. With perhaps some, or even very little, regard for the suggestions of the superintendent—if, indeed, any are offered—a system for this hospital is duly formulated, presented, and adopted. By these methods we can never better our understanding each of the other. Hospitals vary so widely in their organization, in work done, and in the financial support, with the locally developed customs for handling details of this financing, that accounting systems are devised for particular conditions and particular hospitals, and an understanding of general hospital conditions and hospital work has not yet been attained by accountants. And the hospitals have done nothing to develop broader men or better systems.

With this larger idea of hospital accounting in mind, this paper will attempt to bring out the following points:

1. Uniform distribution headings for expenses are at present impracticable. The bases for these must be standardized first.

2. Published figures for operation cost should not be on the cash basis, or, in other words, simply the "bills paid," but represent value of supplies actually issued and of wages actually earned in the given year.

3. Certain figures and totals can now be standardized and made uniform—figures representing output, receipts, and costs. Published figures must be truthful totals.

4. Reports must be written as an accounting of a trust to the community and for the benefit of society; not as the arrangement which makes a good showing compared with last year.

5. Recommendations that the American Hospital Association do now adopt certain figures as a uniform standard and certain basic principles to be observed in writing reports, and also establish a permanent committee to carry forward the study of the problem and from year to year make additional recommendations as to standards.

1. A system of accounting which would include all the sources of income received by hospitals, and have expenditure headings for all items of expenditure in the various hospitals, would necessarily be very extensive and therefore cumbersome. Each hospital would need to sort out those headings which fitted their work, and there would be even more than the usual difficulty in determining under which heading to classify a given expenditure. The side that trained business accountants do not know must be generally understood before this can be done. Otherwise it would be attempting to build without a foundation.

After all, it is usually the essential facts or compilations from detail accounting which can be used outside the institution itself. For example, the published figures of laundry cost of a given hospital are of absolutely no value until it is definitely known whether the laundry employees are housed and boarded and to what extent, whether patients are used in this work and to what extent, whether gasoline cleaning and other special cleaning is included, and whether the department carries on the routine renovating and sterilizing required by mattresses, blankets, etc. The custom of the hospital as regards amount of distribution before the publication of a report must be known. For example, was a sum deducted from the food and housekeeping accounts to allow for the laundry help boarded by the institution? Was an item for heat and power included? One may carry the question farther. Did the figure for the cost of power include items representing the food and housekeeping cost or the maintenance of the engineers and firemen? When one investigates the actual cost of any department or item of expense, one meets with the same questions, and each function is dependent on the others. It is, therefore, practically impossible to report figures representing the actual cost of groups of items or of any department. Fairly accurate approximations for any department can be worked out for a given hospital, but only with considerable difficulty and by some one entirely familiar with the organization of the work in this hospital. Reported figures in general must therefore remain, as in the past, simply the direct charges made to any item or department. Even under a uniform list of headings this method would always be subject to two influences. Every superintendent knows that under the same headings it is extremely difficult to keep charges uniformly classified from year to year. Different persons will interpret conditions differently, and every department will tend to charge some other department with doubtful items. The second course of differences will come with the inevitable changes in organization and work. A better bookkeeper or a better system of bookkeeping, general or departmental, will always result in the transference of many items from the general headings to be more specific. For example, greater accuracy adds to the direct charges of a training school and lessens those of general administration. The best that any hospital can do at the present time in distributing expenditures is to make a careful study of the organization and work, then arrange a system of headings that can be split most readily into factors belonging to other departments and can be reassembled to give total costs of various functions. In a given hospital it is not difficult to determine fairly accurately the proportions of the cost of the power plant belonging to the laundry, dispensary, wards, etc.

2. The work of even a small hospital is so complicated, and requires so many departments and so many kinds of work, that even approximate figures for the cost of any given item or department cannot be obtained without a system of accounting independent of cash expenditures. The reports of some hospitals are based entirely on cash expenditures, and therefore represent simply bills paid by them in the year in question. No allowance can be made for differences in the amount of goods on hand, which in any well-managed institution must vary considerably according to the conditions of the markets. It cannot allow for such items as gauze sold a local relief agency, uniform material sold a graduate nurse, etc. One cannot approve of a superintendent taking this money and replacing with new goods without carrying the transactions on the books, or any other subterfuge to prevent cash expended for particular items appearing. Certain credits, as the item for butcher fats, can appear as a cash credit if sold outright; but no cash system can allow for this item if the suet, in place of being sold, is turned over to the laundry to be made into soap. A system of passing all invoices through a central store room will charge direct those expenses incurred on account of some particular department and all items purchased for immediate use, and will carry on stock cards supplies purchased for use in several departments or carried some time in stock. These supplies are charged as issued to the various departments or uses.

By such a store room system account can be taken of stock on hand and all credits and common supplies distributed as used. By such a system all expenses can be reported as net, and, on a system of headings, carefully arranged for splitting and redistribution as desired. A stores system of accounting will save more than its cost for any hospital.

3. There is no reason for combining hospital and dispensary patients. The dispensary figure essential in accounting is the total number of visits. The total cost of the dispensary divided by this figure gives the cost per visit. Dispensary work is now becoming sufficiently organized and standardized so that it is possible to form quite accurate opinions of the service rendered in a dispensary maintained at a given cost per visit. This must assume, however, that the total dispensary cost is accurate and complete, and that common items of expense, such as power plant, etc., have been prorated between the hospital and the dispensary and included in the dispensary total. The essential hospital figures are total number of patients, the total number of days of treatment given, and the total number of short-time or emergency patients. The emergency work for patients who do not go to the wards represents so small a factor in the expenses of an institution that they are usually neglected in the financial accounting; yet the number should be kept separate from the number of ward patients. The number of patients and the days of treatment should be subdivided into "pay patients," who pay the cost of their care or more; "part-pay patients," who pay part of the cost of their care; and "free patients," who pay nothing at all.

The total operating or maintenance cost divided by the total number of days of treatment given gives per capita cost. This figure also represents very accurately the value and quality of services rendered by a hospital, if due allowance be made for the size of the institution and if the total operating cost figure be correct.

The next year will see many questions about methods of securing correct hospital cost totals brought up in the Cleveland hospitals. Through the Hospital Council it has been established with the State Industrial Commission and the local corporations that the responsibility for the care of industrial injuries requires that hospitals be paid for ward treatment at the rate of per capita cost. A less figure or the usual ward rate is really giving charity to the corporations and to the state, and this is unnecessary and unwise. As fast as contracts are running out, the hospitals of Cleveland are insisting that they be renewed at per capita cost figures. This will bring into active discussion all factors contributing to total operating costs.

If the total operating cost is correct, component parts must be, in turn, correct; and, if arranged for study, they can be used in many ways. For example, the total number of days of treatment divided by the total number of patients gives the average stay of each patient. This, with a knowledge of the general character of the work done in this particular institution, will tell much of its efficiency. Some hospitals can do certain work in a shorter time than others. This is particularly true of surgical patients. The longer time consumed for x-ray examination, for laboratory, and for other details materially affects the average stay for given work. Every misstep in hospital technic lengthens the patient's stay. The ratio between the x-ray supplies used and the number of patients indicates accurately how well this safeguard to diagnosis is used. The same is true of other laboratory procedures.

It is now generally conceded that capital accounts should be kept entirely separate from maintenance accounts. In capital accounts are included all receipts or disbursements from endowment funds, or transactions on account of real estate or new buildings. By common concession the ordinary upkeep of grounds and buildings is included in the maintenance or operating accounts, but extraordinary repairs or additions are carried in capital accounts. The basic principle seems to be that the hospital should be given a place to work, but that all expenses connected with activities of an institution are proper charges against maintenance. The expenses of campaigns or the carrying out of any other means of raising funds should be charged in full either to capital or to the maintenance accounts as the money raised is applied. The money all comes from the community, and a full and correct accounting should be rendered.

To be useful, maintenance or operating accounts must be the whole and the exact truth. Not long ago it became advisable to know the exact x-ray receipts and the exact x-ray expenses of a certain hospital. To obtain each of these figures, three factors were necessary: 1, the receipts and the expenditures carried on the hospital books and reported in the annual report; 2, that portion of the receipts used to pay bills directly without either side appearing in the published report; 3, the income of a special endowment for x-ray work, which was used directly to pay bills without inclusion in the published report. The lack of value of such published figures for comparison or to study hospital efficiency is readily apparent. Such a condition is wrong from several viewpoints. The activities of this department, as ascertained by the published financial reports and compared with the number of patients, would indicate a lack of development of x-ray work in this hospital. It would give a false impression of the amount of this work used to safeguard patients, and therefore place on the defensive both the staff of the hospital, for its attitude toward accurate work, and the superintendents of the other hospitals, in their efforts to secure funds to do this work properly. The fact that a hospital has a special endowment for some particular purpose should not in any way affect the report of maintenance or operating costs of this hospital. The income of special endowments should be carried on the general maintenance accounts as receipts and the corresponding disbursements as expenses. An effort should be made, too, to account for these disbursements correctly. Special endowments may require a hospital to be really lavish with this one item, or else to interpret it broadly on general principles of equity. When this is done and a special endowment really meets other items of expense, the disbursements should be distributed accurately. This may be a little difficult on a cash system, but entirely easy on the stores system of distribution.

All items purchased for the hospital or secured by the hospital, to be paid for by individuals, should be included in the capital or operating accounts, as the character of the item classifies it. Very often some friend of the institution agrees to pay for some new machine or article much needed, and the use of this article directly affects the work of this institution. Other hospitals must purchase this same article. A common basis can be secured only when the institution, fortunate enough to receive such gifts, carries them on both sides of the ledger. Of course this custom will increase the year's expenses; but, if the accounting cannot show up equally plainly the increase in the receipts, it is poor accounting; and, if the added efficiency or the better facilities for work secured through these articles do not influence the reports of the output or the work done by the institution, such articles were either works of art or something is wrong somewhere.

If hospitals will begin by reporting patients as indicated above and strive to make all financial reports a study of actual and total costs independent of local conditions, this alone will constitute a working basis and a good beginning toward uniform accounting.

4. Trustees and those who cannot have adequate and reliable first-hand information of the work of an institution necessarily compare the report of one year with that of the last year. This has been the source of a large part of the fallacies which have developed in hospital accounting. To make a good showing to the trustees in the finances has often been too strong a factor in the minds of those writing the reports. The remedy for this situation is at hand and effective. The financial or operating accounts are, after all, only one side of the ledger, but, as developed by accountants, trained commercially only, it has unfortunately been the prominent part, if not all, of the report. To make the accounting accurate and complete, we must find a way to report the other side—the value of the days of treatment rendered, the work of the dispensary, of the laboratories, the quality of the work, and the contribution of an institution to research and education. Such reports can be made intelligible and even interesting to trustees, and the question of quality of service can be raised. There is really something to show for the money spent. We are coming to know that the removal of one kidney is far from a credit to a hospital if done without determining the condition of the other by x-ray and by chemical efficiency tests. It may not be possible at first for a hospital to apparently get full credit for safe and careful work, but the initiated may learn the facts readily. Hospital accounting developed by hospital workers can be made quite eloquent in sounding praises of the well-managed, progressive institution. It can be made to tell most plainly the story of inefficiency and defective service.

Something over a year ago the Cleveland Hospital Council attempted a beginning in uniform accounting. Money figures were not considered, and this beginning was made after long discussion and deliberation. We agreed to report hospital work in terms of "pay patients," part-pay patients," and "free patients." Since this was adopted, there have been frequent additions to the uniform schedule. The complete schedule now adopted is appended. It is arranged under two headings—"the work" and "the cost." We have attempted to divide the total operating expenses of the hospital, including dispensary, into six headings, but it is generally recognized that as yet this will be the most unreliable part of the report, and we are not yet ready to propose any detail of distribution which can be common to the twenty-one hospitals of the Council, varying as they do in size, in work, and in financial support. The superintendents of these twenty-one hospitals are quite sure, however, that the other figures can be accurately given, and that this can be done without confusion or additional expense for accounting. We know that this much of hospital accounting can be made uniform without difficulty in twenty-one institutions, large and small, public and private, general and special, Catholic and Protestant and nonsectarian, with men and with women staffs, institutions without or with endowments, and varying fully as much as the institutions represented in our membership.

5. Uniform or standardized accounting cannot come at one time, but must have systematic development. It cannot come directly from resolutions adopted by this association. There are boards of trustees, treasurers, and auditors to be considered. Yet, on the other hand, the present time seems propitious to make the necessary beginning. The following resolution is therefore offered for the consideration of the association:

Resolved, that a special committee of three on hospital accounting be appointed by the president to serve until discharged by the association. This committee shall from time to time propose such recommendations leading to more uniform and comprehensive accounting as it shall deem advisable. The recommendations and reports of this committee shall be considered by the association, and, if the recommendations are adopted, an effort to cause their use in hospitals represented in this association should be made by the members of this association representing such hospitals.

[Schedule of Uniform Accounting]

CLEVELAND HOSPITAL COUNCIL

Report of .....
(Corporate name of institution.)

For the fiscal year.....to.....

NOTE CAREFULLY

Please return this report by.....to the Cleveland Hospital Council, 308 Anisfield Building, Cleveland, Ohio.

A hospital patient is defined as a person receiving continued medical and nursing attention, who occupies a separate bed and remains not less than twenty-four hours. Persons giving regular labor for their board should not be included in hospital figures, and the cost of their care should not be included in expenses for hospital patients. Waiting maternity patients, infants, and children occupying hospital beds and receiving continued medical and nursing care should be included. The daily census report for the previous twenty-four hours should be taken at midnight.

The days of treatment given should be obtained as follows: all hospital patients as defined above, treated for any part of the previous twenty-four hours, should be included in this report. The total number of such patients should be figured as the days of treatment given on that day.

Out-patient work of all kinds, and the total cost and receipts for the same should be separated from hospital figures and reported under the proper headings. Otherwise the figures for both hospital and out-patient work will be incorrect and misleading.

WORK

Hospital patients (see above rates)	Number of patients	Number of days of treatment	Amount paid to hospital
1. Pay patients (x).....	.....	.....	.....
2. Part-pay patients (y)	.....	.....	.....
3. Free patients (z)....	.....	.....	.....
4. Public charges (accepted by county, city or township)....	.....	.....	.....
5. Total	.....	.....	.....

(x) Pay patients are those for whom at least the cost of their care is paid. (y) Part-pay patients are those for whom only part of the cost of their care is paid. (z) Free patients are those for whose care nothing is paid. Patients whose bills for hospital service are uncollectible should not be included in this item, but in line 65.

Dispensary patients and emergency or accident patients remaining in the hospital less than twenty-four hours should be reported separately and not included in the above.

6. Beds in private rooms....., Beds in semi-private rooms or wards....., Beds in general wards....., Total	.....
7. Beds in "admitting" or "isolation" rooms or wards (not included in above).....	.....
8. Average days' stay each patient (divide total days .....by total patients.....).....	.....
9. Average patients per day (divide total days .....by 365 days).....	.....
10. Number paid resident physicians and surgeons (including pathologist and other special residents) ....., Number of interns....., Total.....	.....
11. Number pupil nurses in school....., Number probationers....., Total.....	.....
12. Hospital nurses, average on daily duty: graduate ....., special....., student....., Total	.....
13. Number male attendants (orderlies)....., number female attendants....., Total.....	.....
14. Number of other employees (excluding physicians, nurses, attendants, orderlies, and probationers).....	.....

15. Number social service workers..... Cases ..... Visits..... .....
16. Number ambulances—For private use of hospital only..... For emergency service..... For public use (except emergency)..... Total.....
17. Dispensary patients—New patients..... Revisits..... Total visits or treatments.....
(New patients are those who have not applied before during fiscal year. New patients plus revisits equal total visits or treatments.)
18. Accident and emergency patients (patients remaining in hospital less than twenty-four hours)..

CURRENT INCOME

Earnings or Receipts from Operating of Hospital Patients.

19. Pay patients (including the Rose fund..... Including special nurses.....) (Patients for whose care at least cost is paid).....
20. Part-pay patients (patients for whose care only part of the cost is paid).....
21. From county, city, or township patients. Public charges (county)..... Public charges (city) ..... Public charges (township)..... ....
22. Dispensary receipts .....
23. Emergency and accident room receipts.....
24. Miscellaneous, sales, etc.....
25. Total earnings from operation of hospital and dispensary .....

CONTRIBUTIONS FOR CURRENT EXPENSES

26. Federation for charity and philanthropy—(a) Designated gifts..... (b) Discretionary gifts ....
27. Calvary Morris estate.....
28. Entertainments, fairs, etc. (net receipts).....
29. Dues, memberships, etc.....
30. Individuals not included in (a) or (b).....
31. Miscellaneous .....
32. Total contributions for current expenses.....

CAPITAL INCOME

33. Income from endowment funds (special and general) .....
34. Rentals, interests on current funds, etc.....
35. Receipts from sales or other capital funds used for current purposes.....
36. Total capital income.....

SUMMARY INCOME

37. Total operating earnings .....
38. Total contributions .....
39. Total capital income .....
40. Total income .....

CURRENT EXPENSES

HOSPITAL OPERATING EXPENSES

41. Administration (general officers, clerks, stationery, printing, postage, annual report, telephone, etc.)..
42. Professional care of patients (including special nurses....., salary and wages of nurses, orderlies, attendants, employees, medical and surgical supplies) .....
43. General house department, and property (fuel and light, ice, ordinary repairs, rent, insurance, ambulance, laundry, provisions, housekeeping, etc.) .....
44. Social service .....
45. Dispensary .....
46. Miscellaneous—Travel and transportation, etc. ..... Interest on loans for current expenses ....
47. Total operating expenses.....

CORPORATION EXPENSES

48. Salaries (secretary or treasurer) and incidental operating expenses of the corporation.....
49. Expenses for raising funds for income, plant or deficits; for education, advertising and publicity. (a) Commission or salary paid individuals..... (b) Proportion of federation's expense for collection of funds, for extension, education, and efficiency..... .....
50. Interest on mortgages and loans.....
51. Taxes, stationery, legal or other corporation expenses .....
52. Total corporation expenses.....

TOTAL CURRENT EXPENSES

53. Total current income..... .....
54. Cash on hand or deficit at beginning of year..... .....
55. Total current expenses..... .....
56. Cash on hand or deficit at end of year..... .....
57. Average daily per capita cost of patients (divide total cost..... by total number of days of treatment.....) .....
58. Average cost per dispensary visit (divide total cost..... by total number visits.....) ....

EXTRAORDINARY OR CAPITAL EXPENDITURES

(To be added to permanent value of the plant.)

59. New machinery, apparatus, etc..... .....
60. Alterations and extraordinary repairs..... .....
61. New buildings and land..... .....
62. Miscellaneous ....
63. Total capital expenditures ....

ASSETS AND LIABILITIES

64. Uncollectible pledges, dues, etc., charged off..... .....
65. Uncollectible bills for hospital service, charged off .....

ASSETS

	Assets	Liabilities
66. Value land, buildings, and equipment (used for hospital purposes)	.....	
67. Restricted endowment funds.....	.....	
68. Unrestricted endowment funds....	.....	
69. Cash on hand account principal (uninvested and incomplete for special purposes)	.....	
70. Accounts receivable	.....	
71. Total assets	.....	

LIABILITIES

72. Loans or mortgages..... .....
73. Accounts payable ....
74. Other miscellaneous liabilities..... .....
75. Total liabilities ....
76. Excess assets over liabilities..... .....

OFFICERS OF YOUR HOSPITAL

President....., Address.....
Treasurer....., Address.....
Secretary....., Address.....
Superintendent of hospital.....

MEMBERS OF BOARD OF TRUSTEES

.....

IF CITY INSTITUTION

Director of public welfare.....
Superintendent of hospital.....
Commissioner of charities and correction.....
Secretary to director.....

REMARKS AND EXPLANATIONS

Signature of superintendent.....
Approval signature of president or treasurer or secretary of board of directors .....

A campaign which will have for its object the raising of a fund of $250,000 to build a new and larger home for the Homeopathic Hospital of Providence, R. I., will be launched in that city next June. A building with a capacity of 100 beds is planned, and the site has already been purchased. The institution was established in 1904. Last year 794 cases were admitted to the hospital proper, while 6,632 others received treatment in its out-patient department. The building now occupied was originally a residence and is no longer adequate.

Several changes have recently taken place in the nursing staff of the Vancouver (B. C.) General Hospital. Miss G. N. Snyder, for four years supervisor of the operating rooms, has resigned this position to become superintendent of the training school. During the coming year Miss Alma Hodges, a graduate of the Royal Victoria Hospital, of Montreal, will be demonstrator to nurses. Mrs. I. Buttle, late of the supervising staff, has been appointed assistant superintendent, while Miss A. Peters will become night superintendent.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General, United States Army.

The Garibaldi Hospital at Melito, Calabria. Nipiologia, Napoli, 1915-16, I, No. 2.

Melito in Calabria was one of the towns which suffered severely from the great earthquake of 1908. It was then that Dr. Evoli undertook to erect a new hospital. About 400,000 francs were collected for this purpose in Italy and foreign countries. Half of this sum was used for the construction of the hospital (5,000 francs per bed). The hospital has so far 50 beds, with a medical and a surgical division on the first floor. On the second floor is the lying-in and gynecological division. The hospital is located on the coast, with a beautiful view on the blue Mediterranean.

The Royal Institution of the Annunziata in Naples. Nipiologia, Napoli, 1915-16, I, No. 2.

This institution for mothers and their babies was established through the efforts of Dr. Tropeano in the early part of this year, and has done good work since. It assists more than 1,000 poor families each day. It feeds daily about 450 poor mothers, it furnishes milk for babies of poor families, it gives free medical consultation to mothers, it conducts a crib for babies of mothers who are working during the day. A school teaching the duties of maternity and infant hygiene and a school of eugenics and social hygiene are also connected with the institution.

Convalescence Services in Children's Hospitals in 1916 (A propos des services de convalescence des hôpitaux d'enfants en 1916). Dr. H. Triboulet. Bulletins et mém. de la Société méd. d. hôp. de Paris, 1916, XXXII, No. 17.

In order to combat the mortality of children in Paris, the Medical Society of the Paris Hospitals makes the urgent request that the city increase the efficiency of the present children's hospitals and erect new establishments for open-air treatment (1) for nurslings, for whose hospitalization no provision has so far been made, (2) for children convalescing from minor and specific infectious diseases, (3) for children with external tuberculosis, (4) for children with pulmonary tuberculosis, and (5) especially for children in the so-called pretubercular stage—i. e., children with multiple adenopathies and presenting the symptomatic anemia of tubercular infection.

The Hospitalization for Tuberculous Soldiers (Sur l'hospitalization des militaires tuberculeux). Dr. C. Jolly. Jour. de méd. de Bordeaux, 1916, LXXXVII, No. 5.

A great number of men who were sound when they joined the army take tuberculosis from the exposure and hardships of the modern trench war, and have to be discharged from the army. The author regrets that in France no systematic efforts have been made for the care and treatment of these men. He condemns the small sanatoriums and temporary barrack hospitals which have been erected, but which are insufficient to care for all the men. He recommends the erection of large permanent hospitals, which would not only serve during the war, but would be of great value for the treatment of tuberculosis after the war. The south of France is especially adapted to the treatment of this disease. From Bordeaux to Bayonne there is an immense pine forest which belongs to the Government. In this healthful region, so favorable for the treatment of pulmonary tuberculosis, large hospitals could be erected, each capable of housing 800 to 900 patients. For the marine cure the Mediterranean coast of France would also be extremely well adapted for this mode of treatment.

The Ocean Hospital at La Panne. Dr. J. L. Faure. Presse médicale, Paris, 1916, No. 29.

On the Belgian sea coast, at the village of La Panne, near the mouth of the Yser, is one of the finest and best equipped military hospitals of this great war. This hospital owes its existence to the energy and exceptional talent of organization of one man, Professor Depage, of Brussels. Aided by the king of Belgium, Dr. Depage in December, 1914, converted the fine Ocean Hotel and a number of neighboring villas in a few weeks into one large hospital. The whole comprises 800 beds, of which 150 are placed in the hotel. One pavilion is exclusively reserved for the reception and disinfection of the wounded. A great number of automobiles are always ready to bring the wounded from the firing line, which is less than ten kilometers distant. Dr. Depage is assisted in his laborious task by twenty-three physicians and surgeons, and 120 Belgian, English, and French ladies are doing the nursing service.

The Central Hebrew Hospital in Amsterdam (Centrale israëlitische ziekenverpleging). Ziekenhuis, Amsterdam, 1916, VII, No. 8.

The new Hebrew hospital in Amsterdam was opened on July 4 of this year. It is built of gray brick in a simple style, and is 45 meters long and 13 meters deep. A central corridor, two meters wide, passes through the length of each of the three floors. The second story contains the rooms for first- and second-class patients; the rooms of the latter have two beds each. On this floor is also a room for infants and two operating rooms (aseptic and antiseptic). The nurses' rooms are on the top floor. The hospital has electric light, electric bells, telephone, and speaking tubes to be used on the Sabbath, when the use of the electrical apparatus is not permitted. A large terrace provides for open-air treatment. The hospital has room for 52 patients.

Tuberculosis Sanatoriums in Bratsberg District (Tuberkulose-hjemmene i Bratsberg amt). Dr. H. F. Holst. Tidsskrift f. d. norske Laegefor., Kristiania, 1916, XXXVI, No. 12.

The people of Norway are progressive and public spirited. When the movement of combating tuberculosis by the establishment of sanatoriums started, they were among the first to put the new ideas into practice. Bratsberg District had already a sanatorium at Skien, but this was found insufficient. In 1908 it was decided to erect three new sanatoriums, all of which were completed during the last five years. It is noteworthy that, instead of one large sanatorium, three small ones in different parts of the district were erected—one at Hitterdal, one at Krageroe, and the third at Koiteseid. All these sanatoriums

are two-story buildings, of simple but practical construction. They are located on mountain sides, commanding a wide view. Each sanatorium has room for 15 to 20 patients. The building costs for the three sanatoriums were 111,500 crowns (about $30,000.00).

Isolation Hospitals in the War Zone (Gli ospedali contumaciali in zona di guerra). Dr. L. Mazzetti. Giornale di med. militare, Roma, 1916, LXIV, No. 5.

To prevent sick and wounded soldiers coming from an infected zone from being carried into the interior of the country, the medical department of the Italian army has decided to establish observation hospitals near the front, where all sick and wounded soldiers are kept under observation for a certain period. Here the soldiers are cleaned, disinfected, and treated, and necessary operations are performed at once. The author describes such a hospital established near the city of Udine, consisting of five two-story pavilions for the sick and eight additional buildings. During the last four months 10,640 patients have been treated at this hospital. Among them 114 were found to be carriers of infectious diseases.

The Day Sanatorium "Het Weusthag" of the Anti-Tuberculosis Society at Hengelo (Dagsanatorium "Het Weusthag" der Vereeniging tot bestrijding der tuberculose te Hengelo. Tuberculose, s' Gravenhage, 1916, XII, No. 3.

Hengelo, a town of about 6,000 inhabitants, has a considerable factory population, among whom tuberculosis is not rare. At a meeting held in June, 1912, of the workmen and factory owners of the town, it was decided that each workman should contribute 1 cent every week toward the establishment of a day sanatorium for tuberculous patients, and that each factory owner should contribute as much as all his workmen together. The community gave 1,000 florins and a number of public-spirited men contributed various amounts, so that in 1914, 16,000 florins (about $7,000) had been collected. This was sufficient to erect a small building with two open-air halls and the necessary equipment. The patients stay at this sanatorium only during the day. To provide for the necessary running expenses, the workmen and factory owners continue to make the same contributions mentioned above.

Hospital Experiences with an Open-air Hall (Ziekenhuiservaringen met een openluchtzall). Dr. J. C. Wortman. Ziekenhuis, Amsterdam, 1916, VII, No. 8.

An ordinary sick-ward of 16x8.8 meters was converted into an open-air hall by widening the windows on the two long sides and putting in their place sash windows of such form that only the upper or lower half of the whole window can be closed. The beds are placed before the windows in such a way that the patients can look out, their feet being turned toward the windows. Movable curtains are placed behind and between the beds. During winter time the patients are provided with additional coverlets, woolen jackets, gloves, and skull caps. In the cold season the windows are closed only during very unfavorable weather. The patient usually prefers such an arrangement to an ordinary sick-ward. Instead of looking at his fellow sufferers, he looks out into open nature, on the green trees and blue sky. The pure air has a very favorable influence on his general condition. All the patients have better sleep, wake up refreshed, and show a better appetite. Of 193 patients treated in this manner there were scarcely five whose condition was not favorably influenced. In all cases of pneumonia, gastric, intestinal, liver, and heart disease the improvement was marked. This treatment was also very successful in tuberculosis, croupous pneumonia, pleurisy, bronchitis, and gangrene of the lungs. In pneumonia the cool atmosphere exerted an especially beneficient influence on the restlessness and the febrile and delirious condition of the patients. As would hardly be expected, rheumatic conditions are also favorably affected by this method of treatment. Only two cases of pernicious anemia and some cases of neurasthenia did not bear this treatment well.

A Modern Pavilion Hospital on the Barrack Style (Un moderno padiglione ospedale a sistema baraccato). Ing. G. Marcovici. Rivista di ingegneria san., Torino, 1916, XII, No. 12.

The author describes a pavilion of the hospital service of the Italian army which presents various interesting features. It consists of a long, narrow one-story building, divided in the middle by a partition which completely separates the two divisions. Each division contains 8 beds (4 on each side) and the necessary service rooms. The entrances to the sick rooms are on the narrow sides of the building. The most interesting feature lies in the construction of the pavilion. The four sides of the building are formed by a double wall of large flat hollow tiles, with a hollow space between the two walls. Pillars of reinforced concrete hold the walls in position and support the roof. Where the tiles join, flat irons, protected against rusting, connect the tiles of the inner and outer walls. There being three air spaces in the walls, the patients are thoroughly protected against changes of temperature. The author adds that such a pavilion can be built at a low cost and in a very short time. A military reserve hospital on this plan containing 200 beds is now being constructed for the Italian army.

The Education of the Nurse. Gordon K. Dickinson, M. D. Journal of the Medical Society of New Jersey, XIII, No. 9.

The nursing profession has been organized in the states, and has exerted its influence as a professional body on hospitals, allied institutions, and legislatures. The prime object in establishing a nursing school was for the care of the sick in the hospital and in the home, that the physician and surgeon might have some one to intelligently observe his cases and carry out his instructions. The fact that hospitals are taking on themselves the training of nurses as a profession, together with the so-called high standards of educative requirement, and the long period of three years as demanded by the legislature at the request of the members of the nursing profession, accounts for the small number of girls applying for training.

Is the present method satisfactory, or would it not be wise to take the young woman from the grammar school, give her two years' intensive training at the bedside, supplemented by book instruction, and then, with hospitals standardized, would not a diploma from such an institution be sufficient without compelling the graduate to pass the State Board of Examination?

College Nursing. Ed. Nursing Times, 1916, XII, No. 589.

The following particulars of the College of Nursing, Ltd., are enumerated in the following objects: 1, to organize the nursing profession; 2, to secure state registration for the trained nurse; 3, to make and maintain a register of trained nurses, and by this means to protect the public; 4, to protect the interests of trained nurses;

5, to raise and maintain the standard of training; 6, to establish a uniform curriculum of training and one portal examination; 7, to establish lectureships, scholarships, and in every way to promote the advancement of the nursing profession.

Conditions of registration applicable during the period of grace to existing nurses are as follows: Applicants are required (a) to be at least 21 years of age; (b) to be of good character; (c) to hold a certificate or certificates of three years' training in a nurse training school or schools recognized by the council for the purpose of admitting practicing nurses to the register of the college; or (d) to hold a certificate of not less than two years' training in a nurse training school recognized by the council for the purpose of admitting practicing nurses to the register, followed by at least two years' bona fide practice as a nurse; or (e) to produce evidence of training to the satisfaction of the council, having regard to the date at which the training was taken. followed by at least five years' bona fide practice as a nurse.

Every certificated trained nurse should apply at once for registration by the college of nursing.

Is an Aseptic Operating Room Possible? (La salle aseptic pour opérations est-elle réalisable?) Dr. H. C. Richter. Rev. d' hygiène, Paris, 1916, XXXVIII, No. 1.

There are four causes which play a part in introducing harmful germs into the operating room: 1, the personnel (the surgeon and his assistants) as carriers of dust; 2, the patient; 3, the necessary objects (tables, instruments, etc.); 4, the external air as a carrier of dust and germs. For the first two causes it is the duty of the surgeon to take the necessary precautions. With regard to the two latter causes, the author puts up the following postulates: 1, the operating room must have no communication with the external air; 2, only the strictly necessary persons must be admitted to the operation; 3, the operating room must be ventilated only with sterilized air; 4, it must be sterilized immediately after each operation; 5, all movable objects must be sterilized.

To realize these postulates, the author demands that the operating room communicate only with a completely sterilized room, where the instruments, dressings, etc., are kept ready. This room forms the first zone of protection. A second zone of protection is formed by rooms which communicate with the outside (wardrobe, anesthesia room, etc.) These rooms are kept strictly clean.

The operating room should be at least 6 meters long, 5 meters wide, and 5.50 meters high. The windows, looking toward the north, should be slanting above and have no horizontal portion; they should be double, with an interval of about a meter between the external and internal panes. This prevents a change of temperature and the deposition of watery vapor on the panes. The space from which the students watch the operation should be completely shut off by window panes. For lighting the room the author would use two electrical luminous tubes (Moore system) placed in the interspace between the inner and outer window. This would secure the same light night and day.

The Children's Clinic of the Municipal Hospital at Amsterdam (De kinderklinick van het binnengasthuis te Amsterdam). Dr. J. E. Stumpff. Ziekenhuis, Amsterdam, 1916, VII, No. 7.

This new clinic consists of two three-story buildings, one behind the other, with a connective middle structure. The first building, fronting on the street, contains the administrative services. Corridors on each floor connect the two buildings. On each side of these corridors are the rooms for the nurses. Each floor of the rear building is divided into two large wards. The first floor forms the observation or isolation division, modeled after that of the Hospital Pasteur in Paris. Along the wall of these large halls are glass boxes reaching from the floor to the ceiling and closed in front by glass doors. These boxes are 2 meters wide, 3 meters deep, and 4.5 meters high. Each box has a heating radiator, an open-air window, electric light, and an electric ventilator. Children entering the hospital are placed in these boxes for about twenty days. After this observation period they are removed to the general wards if they are found to be free from infectious diseases.

Conditions of the Hospitalization of Children; Prevention of Hospital Infection, Especially in Infants' Wards; Results of the Box System at the Herold Hospital (Les conditions d'hospitalization des enfants; prophylaxie de la contagion hospitalière, specialement dans les salles de nourrissons; résultats du système des boxes a l'hôpital Hérold). Dr. Barbier. Bulletins et mém. de la Société méd. d. hôp. de Paris, 1916, XXXII, No. 19.

The mortality of children in hospitals does not only depend on the severity of their individual disease, nor on their power of resistance, but also on the prevention of hospital infection. Hospital statistics must, therefore, take account of the deaths due to the diseases for which the children were received into the hospital and those due to hospital infection. If the mortality due to the latter cause is very low or very high, it will indicate that the conditions of the hospital are either good or bad. Theoretical views of preventing hospital infection have little value; success depends entirely on the manner in which the means of prevention are applied in practice and on the conscientiousness with which they are applied. For this purpose a permanent, educated, and well-trained nursing personnel is necessary, and this is unfortunately not found in French hospitals.

The fundamental principle in the hospitalization of children is the box system. It prevents crowding of the wards and direct infection from patient to patient. There should be only one bed in each box, but unfortunately circumstances made it necessary at the Herold Hospital to place, in some cases, two patients in one box. The sterilization of bed clothing is of highest importance. By demanding strict sterilization of all bed clothing, the author was able to prevent almost completely all cases of skin diseases, especially those of the scalp. When seven such cases suddenly appeared, it was found that two new nurses had neglected this rule of the hospital.

From 1909 to 1913, 1,238 patients were received in the infants' division of the Herold Hospital. Of these 442, or 35 percent, died. But if the patients who died within twenty-four hours after their arrival (4) and those that died from tuberculosis (129) are subtracted, the mortality is only 309, or 27.9 percent. Among the 1,105 children who recovered, all the diseases of infancy are represented, as bronchopneumonia, meningitis, syphilis, etc.

Plans for a Methodist hospital to be erected at Memphis, Tenn., by the Memphis, North Arkansas, and Mississippi conferences have been accepted, and construction work was expected to be started in November. The plant will consist of a seven-story main building, with a five-story wing at each end and two such wings at the rear. The frontage of the main building will be 200 feet and the length of each wing 124 feet. The hospital is designed to accommodate 300 patients, and will have eight operating rooms. John Gaisford, of Memphis, is the architect.

INDEX OF HOSPITAL AND SANATORIUM LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army.

Aikens, Charlotte. Clinical Studies for Nurses. 3d ed., 565 pp., 8vo. Philadelphia and London, W. B. Saunders Co., 1916.

Baker, Josephine. The Possible Reduction of Mortality Among Subnormal Institutional Babies. Trans. Am. Assn. Study and Preven. Inf. Mortality. Baltimore, 1916, VI, pp. 244-251.

Barbier, H. Conditions of the Hospitalization of Children; Prevention of Hospital Infection; Results of the Box System at the Herold Hospital (Les conditions d'hospitalisation des enfants; prophylaxie de la contagion hospitalière; résultats du systeme des boxes a l'hôpital Hérold). Bull. et mém. de la Société d. hôp. de Paris, 1916, XL, No. 19.

Bichelonne and Mouriquand. Surgical Ambulances Near the Front of the Armies (Ambulances chirurgicales proches du front des armées). Arch. de méd. et pharm. militairés, Paris, 1916, LXV, No. 4.

Briggs, L., and Stearns, A. Recent Extension of Out-Patient Work in Massachusetts State Hospitals for the Insane and Feeble-Minded. Proceed. Am. Med.-Psychol. Assn., Baltimore, 1916, XXII, pp. 203-212.

Dewey, R. The Development of Detached Wards at the Kankakee State Hospital (1880-1890). The Genesis of the Movement for Segregated Construction. Proceed. Am. Med.-Psychol. Assn., Baltimore, 1916, XXII, pp. 189-202.

Faure, J. L. The Ocean Hospital at La Panne (L'ambulance de l'Océan "La Panne"). Presse médicale, Paris, 1916, No. 29.

Flaig. The Sanatorium for Alcoholics, "Haus Burgwald," near Niederdarmstadt, in 1914 (Die Heilstätte fur Alkoholkranke, "Haus Burgwald," bei Niederdarmstadt, in 1914). Alkoholfrage, Berlin, 1915, XI, p. 366.

Flint, J. M. The Organization and Problems of a War Hospital. Mil. Surgeon, Washington, 1916, XXXVIII, No. 4.

Florand, A. A Year's Service in the Contagious Division at Val de Grace (Une année au service des contagieux du Val de Grace). Bull. et mém. de la Société méd. d. hôp. de Paris, 1916, XL, No. 21.

Frost, H. P. Occupation of Patients. Proceed. Am. Med.-Psychol. Assn., Baltimore, 1916, XXII, pp. 305-310.

Gateau, G. On the Beauty and Usefulness of the Profession of Nursing (Sobre la belleza y utilidad del papel de enfermera). Report de med. y cirug., Bogota, 1916, VII, No. 8.

Gaucher. Venereal Diseases at the Villemin Military Hospital During the War (Les maladies vénériennes pendant la guerre a l'hôpital militaire Villemin). Ann. d. maladies vénér., Paris, 1916, XI, No. 4.

Getchell, A. C. A Year's Work of a Local Tuberculosis Hospital. Boston Med. and Surg. Jour., 1916, CLXXV, p. 229.

Gradenwitz, A. A Model Hospital Train; Describing the Completeness of the Bavarian State Hospital Train. Scient. American Suppl., New York, 1916, CXIV, p. 664.

Hamilton, E. A. Experiences in a German Reserve Hospital Under the Auspices of the American Red Cross. Mil. Surgeon, Washington, 1916, XXXVIII, No. 5.

Hess, A. F. Institutions as Foster Mothers for Infants. Trans. Am. Assn. Study and Prevent. Inf. Mortality, Baltimore, 1916, VI, pp. 255-278.

Hitchcock, J. S. The Massachusetts Tuberculosis Dispensaries and Their Relation to the Practicing Physicians. Boston Med. and Surg. Jour., 1916, CLXXV, pp. 225-228.

Jolly, C. On the Hospitalization of Tuberculous Soldiers (Sur l'hopitalisation des militaires tuberculeux). Jour. de méd. de Bordeaux, 1916, XLVI, No. 5.

Kraepelin, E. A Psychiatrical Research Institute (Ein Forschungsinstitut fur Psychiatrie). Zeitschr. f. d. gesamte Neurol. u. Psychiat., Berlin, 1916, XXXII, No. 1.

Kruse, P. The German Sanatoriums for Alcoholics (Die deutschen Trinkerheilstätten). Alkoholfrage, Berlin, 1915, XI, p. 275.

La Fetra, L. E. The Hospital Care of Premature Infants. Arch. Pediat., New York, 1916, XXIII, No. 5.

Landis, H. R., and Kelly, T. C. Pre- and Post-Natal Work from the Phipps Institute and the Babies' Hospital. Internat. Clinics, Philadelphia, 26 s., II, pp. 211-222.

May, J. V. Some of the More Recent Problems Connected with the State Care of the Insane. Proceed. Am. Med.-Psychol. Assn., Baltimore, 1915, XXII, pp. 179-187.

MacLaurin, C. From a London War Hospital. Med. Jour., Australia, Sydney, 1916, III, p. 393.

Reno, W. W. Laying Out a Field Hospital. Mil. Surgeon, Washington, 1916, XXXIX, 156-161.

Sachs, T. B. Chicago Municipal Tuberculosis Sanitarium. The Municipal Control of Tuberculosis in Chicago. City of Chicago Municipal Tuberculosis Sanitarium, Its History and Provisions, Chicago, 1915, 96 pp., 8vo.

Sanders, Georgiana. Modern Methods in Nursing. 900 pp., 8vo. Philadelphia and London, W. B. Saunders Co., 1916.

Steindler, A. Orthopedic Department at State University Hospital (Iowa). Am. Jour. Care Cripples, New York, 1916, III, No. 1.

Thomson, D. G. A Descriptive Record of the Conversion of a County Asylum into a War Hospital for Sick and Wounded Soldiers in 1915. Jour. Mental Science, London, 1916, LXII, pp. 109-135.

Triboulet, H. The Service in the Convalescents' Divisions in Children's Hospital in 1916 (A propos des services de convalescence des hôpitaux d'enfants en 1916). Bull. et mém. de la Société d. hôp. de Paris, 1916, XL, No. 17.

Vincent, W. Use of Asylums as Military Hospitals. Jour. Mental Science, London, 1916, LXII, pp. 174-178.

Woodson, C. R. A Plea for a Merit System and Civil Service in Our Eleemosynary Institutions. Jour. Missouri Med. Assn., St. Louis, 1916, XIII, No. 7.

Miscellaneous.

The Garibaldi Hospital at Melito Porto Salvo. Nipiologia, Napoli, 1915-16, I, No. 2.

The Grand Priory of the Order of the Hospital of St. John of Jerusalem in England. Annual Report of the Indian Branch for the year 1915, fol., Calcutta, 1916.

The City of Miami, Fla., has invited bids on the erection of a new building for the Miami City Hospital.

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH.
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

The Value of a Course in Household Economics in the Training School[1]

LINETTE PARKER, B. S., R. N., Teachers College, Columbia University.

Before attempting to discuss the value of a course in household economics in the training school, I want to have clearly in mind the subject matter of such a course. I do not offer this as a teacher's outline, but have simply arranged briefly the material for the convenience of this discussion.

1. PLAN AND CONSTRUCTION OF A BUILDING.—This would involve a brief discussion of the value of the proper arrangement of rooms, of the relation between the various departments of the household, the cost of their maintenance, and discussion of systems of light, ventilation, heat, refrigeration, plumbing, and vacuum cleaning, and the conditions that would be necessary to keep them in good order.

2. DECORATION.—Some principles of interior decoration and the therapeutic value of colors and of artistic arrangement can be considered here.

3. EQUIPMENT.—This topic includes the *reason* for the selection of certain types of furnishings and the *cost* of furniture, rugs, blankets, linens, and of the working utensils for the various departments.

4. CARE OF THE HOUSE AND EQUIPMENT.—Under this heading belong (1) cleaning processes and cleaning agents for woods, metals, enamelware, porcelain, paint, etc., (2) the removal of stains from fabrics, woods, marble, porcelain, etc., (3) care of plumbing and its repair, (4) renewal of damaged or worn-out material, (5) prevention of pests, (6) disposal of garbage and waste. This is the part of housework which is generally looked on as drudgery, but an intelligent performance of these processes makes for real cleanliness, sanitation, economy, and efficiency.

5. LAUNDRY.—I think no nurse needs to know intimately all the processes of washing, bleaching, bluing, starching, and ironing of different fabrics unless she is going to take charge of a hospital, but she does need sufficient familiarity with the laundry to understand how much labor is involved and what a large item it is in the cost and life of a hospital.

The value of the first three topics just given, The Plan and Construction, Decoration, and Equipment, perhaps does not seem so practical to some, but I know of no better way to help a nurse adjust herself to the problems of an institution and to impress on her the money value of the property which she is to use and care for during her training and later nursing work. Something definite needs to be done to instill into every nurse a sense of personal responsibility in the care and preservation of other people's property.

When they appreciate the value of furnishings and utensils, the next step is for them to know the right way to care for them. There is a right way and a wrong way to sweep a room; there is a right way and a wrong way to clean a white enamel bed; there is a right way and a wrong way to clean a lacquered surface.

The majority of young women nowadays scorn housework and are not taught it in the home. When they come to the training school, they do not know the proper methods of cleaning or the best agents; they do not know how to remove stains from fabrics, and ofter cannot properly care for a room. Such duties as these cannot be separated from nursing; in fact, they are fundamental, for good nursing means cleanliness to the last degree.

The patient is often too sick to allow a maid to clean the room, and under these circumstances the nurse should know the quickest, quietest, and best methods of sweeping and dusting. The family bath room is often the nurse's work room, and she must know how to care for the plumbing and various fixtures. The nurse should be responsible for the removal of all stains from linen used in the sick-room before it goes to the laundry.

How many sad tales are told like these, "That nurse spotted my mahogany table," "A nurse ruined my brass bed," "My last trained nurse stained my best blankets." We are told of families which actually dread to have a trained nurse come into the house because of some unfortunate experience with one who ruined property. In other homes the servants are almost open to rebellion when a trained nurse arrives.

The nurse is, by the nature of her work, a housekeeper, and, if she is not willing or does not know how to do her part in the machinery of the household, something is surely going wrong. These are facts which the training school must face. When these unfortunate things happen, the nurse may be careless, to be sure, but has she been taught to do any better?

A superintendent may say that her nurses learn these things on the wards as they come up in the daily routine work. Are you sure that each nurse becomes familiar with all the processes? Are all head nurses qualified to teach the right methods and the reasons for them? Is it economy for an assistant or head nurse to show ten different nurses at ten different times a process which could be taught to the group? It seems to me that organized instruction in housework at the very beginning of the probationary period saves the time of heads of wards, saves property by avoiding damage through ignorance, and makes very materially for the efficiency of the individual nurse.

I think a course in household economics at the beginning of the training helps to show the fundamental importance of housekeeping in relation to nursing. Every possible means should be taken to exalt housework in the eyes of the nurses. Do they know that at least two universities in this country are giving degrees in household arts, and that young women spend four years in studying the various arts and sciences allied to housework? Get the best educated woman obtainable to teach this course in the training school. Have the ward work arranged so that *all* the nurses, and not merely the probationers, shall

[1]Read at the annual meeting of the New York State League for Nursing Education, October 17, 1916.

have some part in the housekeeping of the ward. I do not blame probationers for hating to clean when they have it all to do and the seniors look on in a somewhat haughty manner.

It would be of incalculable value if one of the lady managers, or the wife of one of the managers or trustees of the hospital who is herself a good housekeeper, would talk to the nurses of her experience, or, even better, take them to her home and show them just what housekeeping means in a good home.

Most hospitals have the greater part of the housework done by maids, but there has to be a certain amount of cooperation between the nurses and maids. If the nurses know how the maids' work should be done and what it all means, the cooperation is real and not perfunctory, and any supervision on the part of the nurses is intelligent. We all admire a man who, to attain the mastery of some business, begins at the bottom as a laborer and works on up through every department. He is then in a position to cooperate with all the heads of departments and to supervise in any particular of that business. If the nurse has been in the laundry and becomes familiar with the problems there, she will think a little of the conditions in which she sends clothes from the wards. If she has been in the kitchen and has seen the problems of that department and the cost of materials, she will be more considerate of service and less wasteful.

The hospital provides the best laboratory for a course in household economics that could be wished for. In some training schools the probationers take the entire care of their rooms; in one each class thoroughly cleans one ward, cleans an ice box and a stove in a ward kitchen; in one school each nurse has a certain period—two weeks, I think—in the laundry and assists in removing stains and in other processes; in another the nurses must remove all stains from linen in the ward before it goes to the laundry. This is all most practical experience.

Besides these general topics which have been mentioned, there also belongs to a course in hospital economics in the training school talks concerning the customs and regulations in the particular school where the course is given, description of the general organization and duties of the staff and like subjects of local importance, and, under the use of equipment, explanation of the call and telephone systems there in use.

I would, then, summarize the value of a course in household economics in the training school as follows:

1. It helps a nurse to adjust herself to the requirements of the particular hospital and to the general conditions of an institution.
2. It instills the appreciation of the value of property.
3. It gives the nurse at the very beginning correct methods of cleanliness in all the phases of hospital and private nursing.
4. It makes for better cooperation between nurses and employees.
5. It fits a nurse for intelligent supervision of household service.
6. It impresses on her the fact that household duties cannot be looked down on, because the best nurse is essentially a good housekeeper.
7. As a seventh point I will add one not before mentioned—that the more a nurse knows and cares about the cleanliness and good condition of the household in which she lives, the better equipped she will be for good womanhood in whatever field she enters after her training as a nurse.

Teaching of Ethics in Schools of Nursing[1]

CAROLYN GRAY, R. N., Superintendent of Nurses City Hospital, Blackwell's Island, New York City.

Ethics has long occupied a place in our training school curriculum, but only in the past few years has it been considered a subject of much importance. As formerly taught, the course was composed of a few lessons which centered about professional etiquet. The pupils were given instruction as to their deportment in the hospital and the home. The teacher who saw in it an opportunity for the development of character or forming of high ideals was an exception.

Since the field of nursing has broadened from that of only private duty to that larger one which embraces public health nursing, school nursing, rural work, and many other branches, the training school has found it necessary to prepare young women to meet the ever-growing demands made by these new fields. Young women with vision, with charity, with good judgment are needed. It has been a problem to know just what course to pursue to bring out and strengthen these intangible qualities.

A study of the curriculum gives us little encouragement. The only subject there that could be used as a basis for character development is ethics, and even that in the past has not served this purpose to any great extent. It is evident that if we wish it to serve us now, we must ask ourselves very carefully, "What is our purpose in teaching it?" and, "How shall we present it so that it will function in the lives of our pupils?"

There seems to be a great difference of opinion regarding the value of ethical teaching, even among professors of ethics. From the many books on this subject which I have studied, perhaps the clearest impression left on my mind is that *not* the teaching of ethics, but the *lives* of those with whom we are associated help to shape *our* characters.

A noted teacher of the subject says,[2] "To some people the shaping ideals of what character should be, often held unconsciously, come from the books they read; but to the majority they are given by the persons whom they most admire before they are 20 years old." And again, "The greatest thing any friend or teacher can do for a student is to furnish him with a personal ideal." In this connection he reminds us that it took a life, not theories, to furnish us with Christian ideals.

Following this same idea, another educator states,[3] "The chief positive generator of disposition in general, and particularly of kindness, is what the modern psychologist calls suggestion, which is largely identical with the good old idea of example. The child is a *psychic chameleon* (*and no one ever fully outgrows the nature*), and takes his tone from those about him; whatever you desire in your child, have that in yourself; this is the deepest educational principle, and a wonderfully beneficent one to the educator also, for it spurs him to new moral achievement for the sake of his protege. The law of example is the scripture, 'Give and it shall be given unto you; full measure, shaken down, pressed together, running over,' or, again, in adapted phrase, 'Whatsoever ye would that your child be to you, be ye even so unto him.'"

If these assertions are accepted, then the personality and example of the teacher are of the highest importance. While this increases the teacher's responsibility, it also adds dignity to her position, and proves the far-sighted wisdom of those who inaugurated the movement for the

[1] Read at the annual meeting of the New York State League for Nursing Education, October 17, 1916.
[2] G. H. Palmer, Ph. D., Harvard University.
[3] Edward O. Sisson, Ph. D., professor of education, University of Washington.

scientific preparation of teachers for training schools. The teacher, however, shares her responsibility with the other members of the faculty and the heads of the various departments in which pupil nurses receive their training. In addition, we are warned that it is not possible to teach ethics successfully in an unethical atmosphere. Ethics is defined as the science of conduct in so far as this is considered right or wrong. Our aim in teaching ethics is to agree on a definition of right and wrong, and stimulate our pupils to choose the right in preference to the wrong. If the conditions under which the pupils live and work suggest that the dominant ideal of the controlling powers is a "square deal" for the representatives of the seemingly conflicting interests found in the hospital, then the whole system of management will serve as a practical demonstration of the possibility of solving difficult problems according to ethical principles.

Early in the study of our problem one meets the question of when to begin the class work in ethics. The underlying principle is that pupils should be confronted with problems before they are invited to solve them. The problems begin with the probationer and continue all through her school life; in fact, all of her professional life bristles with them. Accordingly, the teaching of ethics should begin with the probationer and continue through the period of training. The study of ethics should not, however, terminate then, because connection with the various nursing organizations will furnish opportunity for further application of ethical principles.

After much study and many trials, I feel that the best suggestions I can offer are as follows: start your classes in ethics early in the probation period. Try to make them informal, and emphasize your sympathy with the pupils and their difficulties. A friendly, helpful attitude on the part of the teacher is essential. A vivid imagination and keen recollection of the difficulties of her own probation will do much to help the teacher put herself in the pupils' place and develop a live interest in their problems. It would be appropriate to open the first class by reading an incident involving some ethical point. History, biography, and the daily papers furnish an inexhaustible fund of just such material.

For instance, the story of Robert Gould Shaw and his leadership of the negro troops in the attack on Fort Wagner during our Civil War is always thrilling, interesting, and apt to provoke discussion. "Robert Gould Shaw was one of the many Harvard graduates who enlisted at the first call of President Lincoln. Toward the end of the war the plan of organizing regiments of negroes was tried, and the command of one of these regiments was offered to Shaw. It was a task made doubly hard by the uncertainty of the discipline and courage of untried negro soldiers, by the natural abhorrence of the South toward regiments of their own escaped slaves, and by the almost certain death to which the commander of such a regiment was exposed. To Shaw it was harder because at this time he was on the eve of marriage. For two or three days he hesitated, and even sent a message through his father to Governor Andrew that he could not accept because he was not equal to the task. But before his father had had time to deliver the message, Robert Shaw telegraphed him to withdraw it—he had decided to go. He wrote to his family that he thought he had decided rightly. 'While I was undecided I had the feeling as if I were cowardly,' he said. He was killed at the disastrous assault on Fort Wagner, and his body was thrown into the trench among the negroes." Was his choice right? There will probably be differences of opinion just as there were at the time of his death.[1]

The lessons in ethics should be built around similar biographical sketches in such a way that instances of loyalty, courage, truth, honor, justice, etc., will enable the class to formulate definitions of these words that they are willing to accept (both individually and collectively) and try to live up to. Discussion of these sketches will probably bring out the principle around which the teacher wants to build the lesson. If she is skillful and encourages all of the pupils to take part in developing the discussion, she can gain a general knowledge of their ideals, at least enough to furnish an appreciative basis for future classes.

The next step is to show that ethical problems or questions of right and wrong similar, for instance, to those that troubled Florence Nightingale, arise in the life of each pupil nurse, and her ultimate character is determined by her solution of the problems and the choice she makes.

Fortunately, we have biographies of men and women (many of our profession) which exemplify just the ideals we wish to instill. Assign portions of different biographies to each pupil, selecting such portions as will illustrate the points you wish to emphasize. "The History of Nursing," "The House on Henry Street," the life of Florence Nightingale, of Elizabeth Fry, of John Howard, of Jane Addams, of Isabel Hampton Robb, furnish incidents of absorbing interest.

With these suggestions in mind, the following subjects are discussed in ten one-hour classes.

NURSING AS A PROFESSION.—Aims and ideals of today.

DEFINITIONS.—Ethics—nursing ethics; qualities, as honor, loyalty, conscientiousness, tact, sympathy, truthfulness.

PREPARATORY TERM.—(1) Qualities needed—determination, courage; (2) forming of right ideals.

CONDITIONS OF ACCEPTANCE.—Conduct; personality; adaptability.

RELATION OF STUDENTS TO—Classmates, seniors, graduates, faculty, doctors, visitors, employees, "esprit de corps."

NIGHT DUTY.—Qualifications for success.

OUTSIDE INTERESTS.—Opportunities and necessity for enlarging knowledge.

GOVERNMENT.—Military discipline, self-government, principles of same, "students' council," "house customs," "hospital regulations," observance.

Some may question the propriety of including "government" in an outline on ethics, but the time to inculcate principles of self-government is all too short, and the success of self-government depends largely on the ethical attitude of the pupils. Even such an authority as Professor John Dewey, of Columbia, warns us not to be surprised if the child who is governed by a master develops into the citizen who is willing to be arbitrarily ruled by a political boss. Does not this principle work out just as truly when applied to nurses?

THE HIPPOCRATIC OATH.—Origin and history, application to medicine, similar application to nursing.

MODIFIED VERSION OF HIPPOCRATIC OATH.—You do solemnly swear, each one by whatever she holds most sacred, that you will be loyal to the physicians under whom you shall serve, as a good soldier is loyal to his officers; that you will be just and generous to all worthy members of your profession, aiding them when it shall be in your power to do so; that you will lead your lives and practice your profession in uprightness and honor; that into what-

[1]Harvard Memorial Biographies, vol. II, p. 203.

soever house you shall enter, it shall be for the good of the sick to the utmost of your power, and that you will hold yourself aloof from all temptation; that whatsoever you shall see or hear of the lives of men and women, whether they be your patients or members of the household, you will keep inviolately secret, whether you are in other households or among your own friends. If you accept these obligations, let each one bow the head in sign of acquiescence. And now, if you shall be true to your word, may prosperity and good repute ever be yours; the opposite if you shall prove yourself forsworn.

My justification for including the Hippocratic oath is that on analysis it proves to be an epitome of the ethical principles we are striving to formulate, and that the daily trying to live up to it is fitting preparation for taking it on graduation.

This outline is at best a tentative one, intended to cover the points which should be discussed, though not necessarily in the order given, as one should be guided more or less by the problems the pupils raise and the trend of the discussions.

Early in the junior course give a few lessons, at least ten—better still, twenty—in psychology as a continuation of the study of ethics. I know full well the feeling which comes over the principal of a nursing school when anyone advocates the addition of a new subject to the curriculum. I look upon the teaching of elementary normal psychology, however, not as an additional subject, but as a useful tool, or, if you will, as a peg on which to hang lessons in ethics.

Bear with me if I remind you that many of our pupils are young and highly impressionable, and the educational standard of New York state is low—only one year in high school. We are anxious that these pupils should accept and incorporate into their lives the highest ideals of life and of our profession; that they should form correct habits of self-control; that they should gradually learn to control others; and that they should recognize and make allowance for abnormal mental conditions—not a small order by any means. Psychology teaches the how and why of habit, helps one to develop self-control, to govern others, and to make allowance for differences of opinions, beliefs, etc.

In one instance a class was started by the teacher inviting the pupils to give their ideas of the meaning of psychology. An interesting half hour was spent in discussing these various ideas, as many were far removed from a correct conception. Then the teacher undertook to explain what psychology really is and in what ways it might be of service to nurses. She raised many interesting questions for the class to consider, and, in turn, invited them to write out questions or problems which, from what she had told them, they felt might be answered by psychology. These questions were kept until such time as the pupils' advancement permitted them to find their own answers. You may be interested in some of the questions:

"How can I teach a child to correct bad habits?" "How can I form the habit of getting up early in the morning?" "What method of instruction would insure the best care for a baby about to leave the hospital with an ignorant, but well-intentioned, mother?" "How would you account for ardent likes and dislikes?" "What would you do to make a baby like its bath?" "How can we overcome the dislike some babies and adults have for baths?" "How could we obtain the active cooperation of an intelligent patient on diabetic diet?"

These questions indicated a wholesome dissatisfaction with a routine method that accomplished results regardless of the patients' attitude or feelings.

The topics discussed in the classes were as follows:

All Acts of Living Beings and Changes in Physical and Mental Conditions, the Results of Forces Acting Upon the Organism.—Stimuli, responses; will, the release of energy in acts; individual differences.[1]

Responses Follow Stimuli, Not at Random, But According to Connections Between Stimuli and Responses Formed in Accordance With Certain Laws.—Physiological basis of connections between stimuli and responses; nervous system and its functions; law of multiple response; law of readiness.

Inborn Connections.—Instincts; typical instincts; overlapping of instincts; delayed and transitory; inborn connections due to heredity, racial, and family traits; variation, individual peculiarities; modifying inborn connections.

Perhaps there has never been a time in the world's history when the need for tolerance was greater than today. This lesson serves to give a broader viewpoint, and tends to make the pupils more generous in their judgment of others.

Learned Connections—Habit.—Law of effect; law of use and disuse; minor laws; the progress of learning.

This was a most interesting lesson, and stimulated the whole class to test the principles governing habit formation.

General Conditions Affecting Connections.—Fatigue, illness and injury, emotions, drugs.

Individual Differences.—Distribution of differences; central tendency and variation; causes of differences; types of differences.

Special Applications of Psychology to Nursing.—Controlling conduct—supplying the stimulus to call forth a desired response, suggestion; observation of people, self-control.

Everyone will agree that this is only a meager introduction to the subject of psychology. The class referred to advocated an increased number of lessons and more thorough treatment of such an interesting subject.

After the lessons suggested have been given, the best continuation of ethical teaching is represented by conferences between the faculty and pupils over daily problems. Some of these problems will demand personal conferences—others can be treated in informal talks following the outline suggested in Miss Parsons' splendid book, "Nursing Problems and Obligations." In my study of this subject I have found a number of books that I think might profitably be added to our reference libraries. One valuable one is R. C. Cabot's "What Men Live By." Dr. Cabot argues that work, play, love, and worship are the most important activities of life. Possibly it would prove profitable to measure our schools by his standards. There is no lack of work. Can the same be said of play? Do we meet with the same cooperation in our plans for social life for nurses as in our plans for work that they should do? The third order is a large one, and the best we can do is to make our pupils feel that we have a very human and close interest in their welfare. The last seems to me important, as even the most unorthodox will agree that worship has an unlifting influence, and, however desirable the spirit of doubt may be from a scientific standpoint, the period of training is a most inopportune time to foster it. I believe pupils should be encouraged to attend a church of the same denomination as their home church. Life in a hospital shatters many illusions, undermines many beliefs, but thoughtful students eventually find they have sacrificed

[1]Outline furnished by Miss Dorothea Romer, A. B., assistant in educational psychology, Teachers' College, Columbia University.

a narrow interpretation of life for a broader, deeper, richer, and more human outlook.

Other books of practical value are "Character Training," by Mrs. Ella L. Cabot; "Everyday Ethics," by the same author; three by Hugh Black, "Friendship," "Work," and "The Open Door;" "Education and Ethics," by Boutroux; "The Teacher," by George Herbert Palmer; Emerson's "Essay on Compensation;" "Moral Principles in Education," by Professor John Dewey; "The Essentials of Character," by Professor Edward O. Sisson; "Ethics in the School," by Ella Flagg Young; "Manual of Ethics," by Mackenzie; James' "Psychology," especially Chapter X; "Essentials of Psychology," by Pillsbury; "Human Behavior," by Colvin and Bagley; "Psychology of Thinking," by Miller; "Diseases of the Will," by Ribot, and "Education of Self," by Dubois.

There are many others, some of which may be better than those I have mentioned, but which I have not had an opportunity to examine.

In closing, let us note again what it seems to me are the important points in the teaching of ethics: (1) a wise choice in the selection of teachers; (2) the importance of example; (3) the necessity of an ethical atmosphere; (4) the value of class discussions of problems involving choice; (5) the need of an introductory course in psychology; and (6), the help derived from personal conferences between the members of the faculty and the senior pupils.

One last word. If, after all our efforts, some of our pupils disappoint us, have we any right to expect to escape the fate of even the greatest of teachers?

New Visiting Nursing Plan

A Public Health Nursing Association recently formed in Peoria, Ill., is advocated by the Illinois State Board of Health as a model for other cities. The Peoria association combines and centralizes all the visiting nurses of the city. Instead of working independently, often overlapping, the different organizations and associations which are interested in any line of nursing under the new plan will so cooperate that the work will be centralized in one office. All nurses will work under the direction of a superintendent, and all records will be filed at the central office in regular form. The new organization has a board of forty-five directors, twenty-four of whom are representatives of associated organizations.

California Raises the Standard

The California State Board of Health has adopted new regulations governing the certification of nurses, which will require that after September 1, 1918, every candidate for admission to a nurses' training school must present a high school diploma and evidence of having taken four years of English, one year of chemistry, one year of biology, and two years of hygiene, sanitation, and household arts. Not until the candidate has met these conditions of entrance and completed the further course of training outlined by the board will she have the right to use the title, "registered nurse."

Miss Edith Weller, R. N., formerly of Tacoma, Wash., and more recently superintendent of the Montesano City Hospital, Montesano, Wash., has been appointed superintendent of the new Bartholomew County Hospital at Columbus, Ind., which will be opened about December 1. Miss Weller has been at the new hospital for some time, looking after the installation of equipment. The building cost about $100,000, and is said to be one of the most up-to-date county hospitals in the country.

SOCIAL HYGIENE
VENEREAL DISEASES

Conducted by WILLIAM F. SNOW, M. D.,
General Secretary, The American Social Hygiene Association.

Please address items of news and inquiries regarding Social Hygiene to the editor of this department, 105 West Fortieth street, New York City.

Clinics for Venereal Diseases—Why We Need Them—How to Develop Them[1]

BY WILLIAM F. SNOW, A. M., M. D., General Secretary The American Social Hygiene Association.

I

The venereal diseases are so prevalent, so insidious in their attack, and so indirect in methods of maiming and killing their victims, that the public is still without an organized defense against them. The continuance of this state of unpreparedness is favored by the complicated relations between the medical and moral aspects of their eradication. For the purpose of this symposium it is desirable to present the case for venereal diseases as a preventive medicine problem, and on the basis of such presentation to emphasize the strategic position held by the dispensaries and hospitals.

TEN SANITARY AXIOMS

Sir Ronald Ross, in his ten sanitary axioms applicable to the prevention of all diseases, holds that, next to the maintenance of the state, it is the duty of scientific government to endeavor to control widespread endemic diseases; that, for economic reasons alone, governments are justified in spending for the prevention of such diseases a sum of money equal to the loss which these diseases inflict on the people, and that in general the money thus spent should be apportioned in accordance with the amount of sickness and mortality caused by each; that it is the duty of governments to make and enforce ordinances required for the prevention of diseases; and it is the duty of the people to comply fully with the provisions of such laws. Other things being equal, that sanitary measure is the wisest which causes the public the least inconvenience, the most practicable which can be administered with a minimum demand on the thoughts, efforts, or compliance of private persons, and the most economical which confers for unit of cost the widest benefits on the public. A suitable expert organization is always required for the prevention of diseases on a large scale, and it is advisable to carry out accurate and repeated measurements of the prevalence of the disease which we propose to prevent, of the cost of the adopted measures, and of the results obtained.

SCIENTIFIC KNOWLEDGE OF VENEREAL DISEASES ADEQUATE FOR ACTION

In the abstract, these axioms are acceptable to the public, but, in their concrete application to the venereal

[1]Read at the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

diseases, not one of them is in force. Syphilis and gonococcus infections are communicable diseases due to identified organisms; their methods of transmission are known, and a practical laboratory and clinical technic has been worked out for diagnosing each of them; they are widely prevalent throughout the world among individuals of every race, sex, age, and condition of people; they find their chief opportunity for dissemination in the intimate personal contact of infected individuals with other individuals who are susceptible; they are largely, but not exclusively, transmitted through the promiscuous sex relations defined as prostitution, and condemned by society as harmful alike to the health, the morals, and the social progress of a people. Recent methods of therapy make practicable the shortening of the period of infectivity, and improve the chances of ultimate recovery of the patient submitting to early and thorough treatment. Once contracted, they may run their course to practical recovery with or without medical assistance, but under present conditions an unknown and large percentage of those infected never completely regain their health or cease to be carriers, and, therefore, are a continuous menace to society. Syphilis in its early stages is especially a public danger, while in its late manifestations the menace is largely confined to the individual himself. Gonorrhea, on the contrary, while a public danger at all times, is particularly damaging to the individual in its early acute development, and later becomes an insidious danger to those intimately associated with him, especially within his home and family.

THE LINES OF ATTACK THE SAME AS FOR OTHER DISEASES

In a word, we know the cause of these diseases; we know that human carriers afford their chief mode of dissemination; we know that in prevalence and injury to the people they are not outranked by any others of the communicable disease group; and we know that, theoretically, we should proceed to apply these facts exactly as we apply the similar facts concerning other preventable diseases. Reduced to simplest terms, this means the adoption and enforcement of (1) measures for the discovery, treatment, and control of individuals already infected, (2) measures for the elimination of conditions of environment favoring the dissemination of the infection, (3) measures for the protection of individuals not yet infected. In practice the application of such measures is exceedingly difficult, and cannot proceed more rapidly than the formation of public opinion on the importance of eradicating these diseases.

EARLY DIAGNOSIS FAVORS SUCCESS BOTH IN TREATMENT AND IN PREVENTION

The need for laboratory examination for evidence of syphilis and gonococcus infections has been one of the first practical measures to obtain public recognition, and facilities for this purpose are being rapidly supplied through health departments and other public or private agencies. Other methods of encouraging the discovery of persons infected are being tried out to a limited extent. Announcements of free advice and treatment service for venereal diseases have been printed in newspapers, posted as signs, and circulated in instruction leaflets. Examinations for evidence of infectious diseases (including syphilis and gonococcus infections) have been requested or required of candidates for employment in many occupations. Regulations requiring the reporting of venereal diseases have been enacted in thirteen states and three cities in other states. Health certificates, whose major requirement is evidence of freedom from venereal disease, have been demanded by the officiating clergyman or as a state regulation for license to marry. An increasing number of parents are demanding similar evidence as a protection to their daughters in arranging marriage. The army and navy recruiting stations have made their examination for these diseases more rigid, and, after enlistment, failure to report the earliest appearance of infection or even exposure is followed by severe penalties and reduction in pay. Some of our universities are beginning to use the opportunity to protect their students and the homes from which they come by examination for these diseases and treatment of those found infected. Similarly, several hospitals have instituted measures including a Wassermann examination for all patients admitted. An increasing number of physicians are becoming interested in the social aspects of the problem, and are finding it feasible to report cases.

ESSENTIAL TO KEEP PATIENTS UNDER SUPERVISION UNTIL COMPLETION OF TREATMENT

Having discovered through these various agencies collectively a larger number of infected individuals, there immediately arises the demand for adequate treatment facilities. Only a small proportion of these cases can afford to become private patients; for those remaining, proper dispensary and hospital facilities are urgently needed. From the preventive medicine point of view, discovery and initial treatment are useless unless all the detected cases can be kept under treatment until no longer infectious, and can be so controlled in their homes and occupations that measures for the protection of their associates will be carried out. This necessity for treatment facilities is slowly becoming recognized by the public, and here and there encouraging work has begun. Free and pay clinics, with both day and evening services, are being established. Departments of syphilology have been created, and departments for genitourinary, gynecological, and dermatological diseases are giving more attention to the subject. Regulations for discharge of patients, measures for keeping patients under treatment until thus discharged, and during this period active social service follow-up methods, have been devised. While this work is only in its beginning, enough has been accomplished to complete the proof that a practical program exists for the first group of measures for the reduction of venereal diseases—i. e., measures for the discovery, treatment, and control of individuals already infected.

THE OPPORTUNITIES FOR THE CARRIERS TO SPREAD THE DISEASES MUST BE ELIMINATED

The second group—those measures dealing with the elimination of environmental conditions favoring the dissemination of syphilis or gonococcus infections—is largely concerned with the repression of prostitution, since the men and women who practice promiscuous sex intercourse are the human carriers on whom these diseases chiefly depend for transmission. Logically, the red light districts of commercialized vice challenge the attention of health departments, and other forces cooperating in health conservation, as strongly as tenement districts, with their poverty and overcrowding. A new kind of clean-up campaign is being added to those already devised in behalf of the battles against tuberculosis, malaria, hookworm, and other endemic diseases. Ways and means of gradually limiting the commercial gains for manipulation of the supply and demand of prostitution have been demonstrated. The segregated vice district, with medical inspection of prostitutes, has been proved inadequate as a practical

public health measure, and all but two or three among our large cities have abandoned any such policy. The rear room of the saloon and the hotel for transients, which develop arrangements in lieu of the closed vice districts, are slowly being eliminated. The citizens of the residence sections are learning the importance of joining in this new campaign on joint medical and moral issues, and are being equipped with such effective weapons as the injunction and abatement law. As prostitution moves out of the hostile city to country roadhouses and nearby towns in its effort to retain the use of alcohol and the host of other aids to stimulation of the demand, county officials and residents are gradually joining the fight. State and federal forces have also been enlisted in the campaign, especially in limiting the supply. In all of these attacks on venereal diseases through control of environment, the dispensary and the hospital have their opportunity to educate their patients on the social aspects of venereal infections, and to enlist the cooperation of these patients with the health and police authorities. The wide extent to which this invaluable service may be carried out has been demonstrated by the medical and social service staffs of a few institutions.

PERSONS NOT YET INFECTED MUST BE PROTECTED

The third group—measures for the protection of individuals not yet infected—involves another field of opportunity for the hospital and dispensary. Mention has already been made of social service follow-up work applied to venereal disease cases. Undoubtedly through such service much may be done to encourage the most effective prophylactic measure, which is sexual continence outside of marriage. The success of parents and school authorities in promoting sex education, the provision of wholesome recreation facilities for all ages and conditions of people, and the progress of other welfare efforts in establishing normal, happy homes and family life, may also be aided by the dispensary staff.

SEGREGATION OF THE SEXES LIMITS THE OPPORTUNITY FOR VENEREAL INFECTION

The compulsory segregation of the mentally incompetent who cannot control their sexual acts under ordinary conditions of freedom, the military segregation of troops in isolated camps or on shipboard, the segregation of large numbers of laborers in occupations which necessitate living in distant quarters, the enforced segregation of prisoners, delinquents, and charity wards of the state—all the varied social and economic measures by which men and women are separated from each other—reduce the spread of venereal diseases because they restrict for considerable periods of time the freedom of many who are most prone to become carriers when they live in communities where opportunity for promiscuous sexual intercourse exists. The medical and nursing staffs of institutions and hospitals dealing with these classes during their isolation can accomplish an important educational work calculated to have a favorable influence.

MEDICAL PROPHYLAXIS MAY PROTECT THOSE NOT INFECTED

Medical prophylaxis presents an unsolved problem, in which the dispensary particularly can render a great service. There is evidence to indicate that medical measures, intelligently applied by the individual immediately on exposure to infection, have influenced in some degree the reduction of venereal diseases. This is particularly true where it is possible, as in the army and navy, for competent officers to instruct men individually and to enforce a program for prophylaxis. Medical prophylaxis is more difficult in application to women, and is further complicated by the classes of women to be protected. The prostitute plying her trade under the cheapest, most sordid conditions of the vice district has little time or inclination to cooperate in any prophylaxis program; the clandestine prostitute endeavors to avoid discovery and is difficult to reach with any advice; the inmates of the so-called higher class houses can ill-afford to offend their patrons by refusing those men who are probably infected, or adopting protective procedures best calculated to protect others; the married woman is usually kept in ignorance of danger from her husband who has become infected. It seems apparent from a study of present conditions and limitations that medical prophylaxis can wisely be employed only under the advice of physicians who are fully informed of the circumstances in each case, and have opportunity to observe each individual until the danger of infection has passed. The private practitioner, the dispensary chief, the military surgeons, and the health department official comprise the qualified persons to work out the extent and method of this factor in prophylaxis. Science gives little promise as yet of prophylaxis through practical methods of immunization against syphilis or gonococcus infections.

SUMMARY OF VENEREAL DISEASES AS A PREVENTIVE MEDICAL PROBLEM

To summarize the practical attack on venereal diseases, it may be said that the first line of attack, consisting of the discovery, treatment, and control of infected individuals, should be led by the health departments cooperating with clinics, hospitals, and the private practitioners; the second, comprising the efforts to eliminate environmental conditions favorable to their dissemination by human carriers, must be led by the police departments cooperating with courts, law enforcement agencies, and the citizens; the third, directed toward protecting the uninfected, can best be led by the school departments cooperating with moral and social agencies and the parents. In all the diverse activities of these three major lines of conducting this health conservation battle, there stands out prominently the need for enlisting the forces of the dispensary and the hospital. This is so largely because the association between treatment and prevention is more intimate in this than in any other group of diseases. It is necessary that the members of the medical profession, as well as other leaders of the community, shall frequently review these facts in order that they may have the courage and the persistence to convert this problem from one of the conspicuous failures of public health to the conspicuous success which science has made possible.

[To be concluded.]

The McNabb Hospital at San Diego, Cal., has been closed to the public and will hereafter be operated exclusively for the benefit of inmates of the Fredericka Home, of that city, for whom it was originally intended. The home has recently received a gift of $200,000 as an endowment, and the income from pay patients at the hospital will no longer be needed. The hospital was built and equipped at a cost of $40,000, and, although small, is said to be one of the most up-to-date institutions of the kind on the Pacific coast.

Augusta, Kas., is soon to have a modern municipal hospital, and it will be erected without a dollar of cost to the residents of the town in taxes. Augusta is fortunate enough to own some big gas wells, and the hospital will be built from the proceeds of the sale of gas from these wells. A three-story building of brick, stone, and terra cotta construction has been planned. The cost is estimated at $40,000.

DISPENSARY AND OUT-PATIENT WORK

Conducted by MICHAEL M. DAVIS, Jr.,
Director of the Boston Dispensary.

Please address items of news and inquiries regarding Dispensary and Out-Patient Work to the editor of this department, 25 Bennett street, Boston, Mass.

Dispensary Progress in Chicago

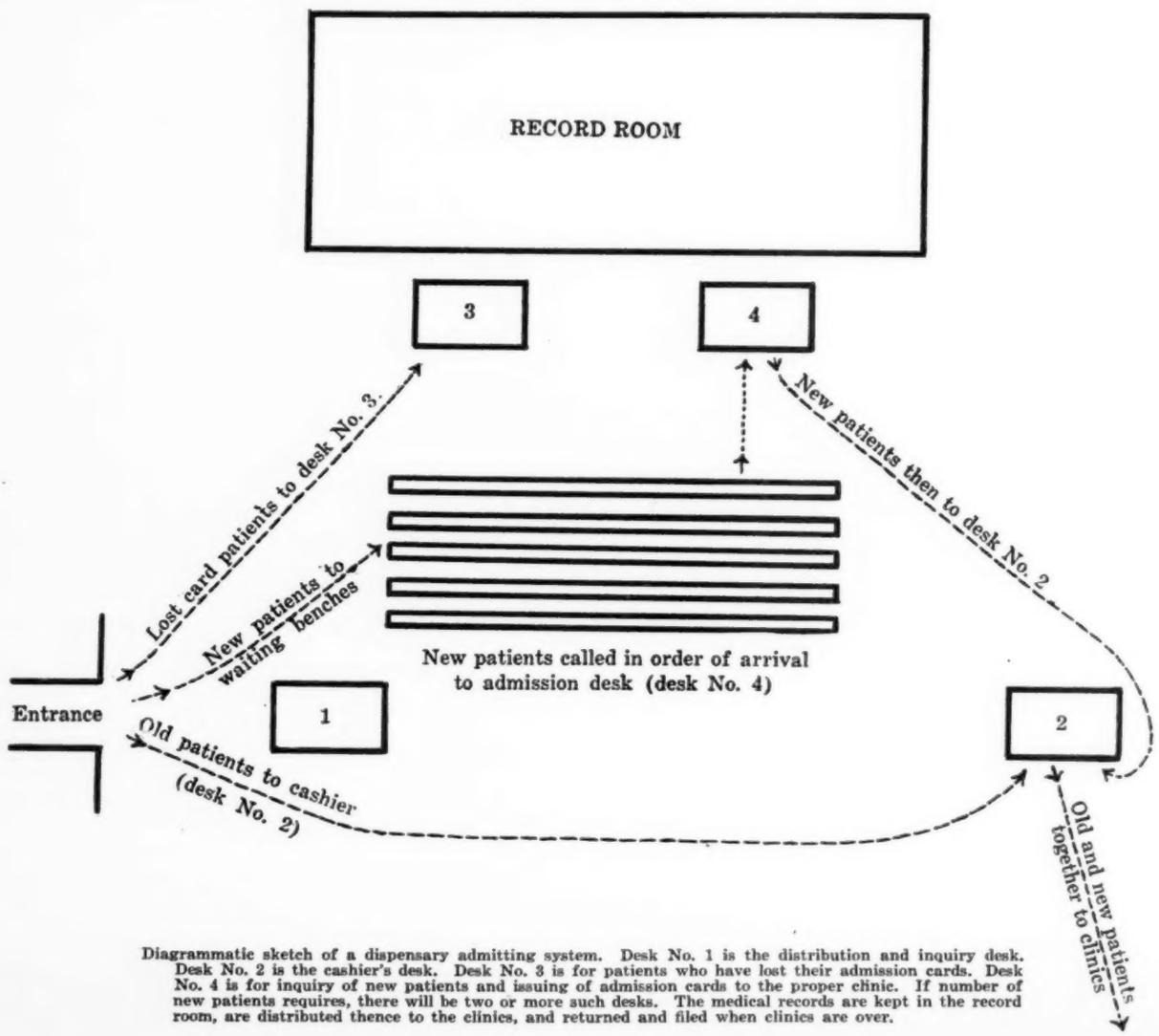
The Central Free Dispensary of Rush Medical College, Chicago, under its progressive superintendent, John E. Ransom, is about to open an evening clinic for the study and practice of industrial medicine and surgery. This is the third clinic of its kind which has recently been established by leading institutions in the country, that of the Massachusetts General Hospital in Boston, under the leadership of Dr. David L. Edsall and Dr. Wade Wright, and that at the University of Pennsylvania Dispensary, Philadelphia, having preceded it.

This clinic at the Central Free Dispensary will be under the direction of Dr. Harry E. Mock, who is head of the medical department of Sears, Roebuck & Co.

The development of industrial medicine, chiefly in connection with large manufacturing plants, has been very rapid in recent years. At the last meeting of the American Medical Association in Detroit a group of physicians engaged in this type of work formed an American Association of Industrial Physicians and Surgeons. Dr. Mock, secretary of that organization, will be in charge of the new clinic in Chicago, where evening clinics will be held.

Methods of Admitting and Registering Dispensary Patients

In response to a number of inquiries concerning this matter which have been received recently by this department, the following description has been prepared. The procedure of admitting patients will be readily understood by a diagrammatic sketch of a dispensary admitting system and the reproduction of a set of forms which are used in the administration of such a system in a large dispensary.


RECORD ROOM
3
4
Lost card patients to desk No. 3.
New patients to waiting benches
New patients then to desk No. 2
New patients called in order of arrival to admission desk (desk No. 4)
Entrance
1
2
Old patients to cashier (desk No. 2)
Old and new patients together to clinics

Diagrammatic sketch of a dispensary admitting system. Desk No. 1 is the distribution and inquiry desk. Desk No. 2 is the cashier's desk. Desk No. 3 is for patients who have lost their admission cards. Desk No. 4 is for inquiry of new patients and issuing of admission cards to the proper clinic. If number of new patients requires, there will be two or more such desks. The medical records are kept in the record room, are distributed thence to the clinics, and returned and filed when clinics are over.

FORMS USED IN THE ADMISSION AND REGISTRATION SYSTEM OF A DISPENSARY

Form No.	Designation	Used at	For the purpose of	Remarks
1	Distribution slips	Desk No. 1	Dividing the incoming stream into (a) old patients, (b) new patients, (c) lost card patients, and of keeping (b) and (c) in order of arrival.	Plain cardboard slips, in three colors, 1½ inches by 2 inches in size, are numbered or lettered serially. Numbers given to new patients enable these to be called to the admission desk in order of arrival. Men and women may be separated, if desired, by giving out numbers in odd and even series. Lost card patients may be given the letter series.
2	Clinic slips	Desk No. 2	Furnishing a memorandum of the patients sent to each clinic, and a receipt for the fee if a fee is levied. The numbers on the slips enable the clinic manager to call patients in order of arrival, and also serve to give the registrar immediate statistics of daily clinic attendance.	Patients "who know the ropes" from previous visits, or who show their admission cards at desk No. 1, go at once to the cashier (desk No. 2), and, after paying a fee, if such is required, receive their clinic slip, which they must show at the clinic in order to be admitted. New patients, after being passed by desk No. 4, go to desk No. 2 and follow the same routine. The set of slips for each clinic may be numbered from 1 up each day, or in a cumulative series. The cashier keeps the stub, gives the patient the slip, stamping both with the date and fee paid.
3	Admission card	Desks Nos. 4, 5, etc.	Serving the patient as a voucher for his admission (and first fee if any); enabling him to show this at later visits; giving patient information, in some cases, as to hours, days, or rules of clinics.	Issued to patient at first visit after inquiry at admission desk. Numbered serially, the number being that under which all the patients' clinic records are filed. If lost by an old patient, is reissued, with former number. The card should be of board or linen, so as to be durable.
4	Clinic record	Desk No. 4, in clinic and record room and in clinics	Recording the medical record of the patient and certain personal and social data. A permanent record.	Data above second red line filled out at desk No. 4 at patient's first visit. Serial numbers the same as on patient's admission card. Medical record filled out in clinic. A patient treated also in other clinics may have a separate card for each clinic, but all are filed in record room under same number.
5	Index card	Record room	Constituting an index (alphabetical) to all patients who have been treated in the dispensary at any time.	Filled out from the data taken at desk No. 4; filed alphabetically in record room. In the form shown the data are copied out (preferably typewritten) from the upper half of the clinic record, the copying being done after the clinics are over for the day and the records have come back to the record room.
6	Fee remission slip	Desk No. 4 and by certain officials of dispensary	Remitting a fee, in whole or in part. Good on one day only. It is wise not to print on the slip the words, "Fee remission," or the like, but to use a distinguishing color. Similarly with No. 7.	Issued by registrar or admitting officers, or by social workers or other officials authorized to sign them. Shown by patient at desk No. 2 and accepted by cashier in lieu of fee. Cashier stamps clinic slip and stubs for the amount paid, or as "Free," and keeps the remission slip, with the stub as a cashier's voucher.
7	Free pass	Desk No. 4 and by certain officials of dispensary	Enabling a patient to secure a series of fee remissions for a specified period, during which it is judged such remissions are necessary.	Used as No. 6, except that patient retains the pass until its expiration. At each visit, on presenting the pass to the proper officer, a fee remission slip is given out for use on that day. Free passes are rarely to be given for more than one month, a reinquiry being then made before renewal.

Boston Dispensary

Name Age yrs. mos. No.

[Red line]

Address

S. M. W. D. Birthplace | Came to U. S. A. | Parent Nativity | Name of Parent Husband, Wife

Occ'n of Patient (*Industry, Dept. Process*) Wkly. Rate of wages $

Occ'n of Head of Household " $

Unemployment No. Children | No. Married | No. Working " $

Others dependent, contributing

[Red line]

Patient complains of

Previous Treatment (*Private doctor, other institution, none, druggist*)

Reason for Change

[Red line]

Dept. Date Social Service { Yes / No

S. S. No.....

[Red line]

Here follow 17 blank lines for memoranda.

[Red line]

Diagnosis (*at first visit*)

Diagnosis (*give date*)

"

"

Form 4. Size, 5½x9½ inches.

NOSE AND THROAT

Room 235 *2d Floor*

Date.....

Paid.....

No......

NOSE and THROAT
Room 235

Form 2. Actual size.

BOSTON DISPENSARY
25 Bennet Street, corner Ash

Patient's Name ..... Age.....

No..... Address.....

Dept..... Date.....
Dept..... Date.....
Dept..... Date.....
Dept..... Date.....
Dept..... Date.....
Dept..... Date.....
Dept..... Date.....

Hours Morning Clinics 8.45—10.30
Evening Clinics 7. — 8.

KEEP THIS CARD

If you do not bring this card with you when you come to the Dispensary, *you must pay ten cents* for a new card.

Form 3. Actual size.

Expires.....

BOSTON DISPENSARY
25 BENNET STREET

Patient's Name .....

.....

.....

.....

Signed.....

Form 7. Actual size.

Patient's Name Age yrs. mos.

No. Address

Social Status Birthplace Race or Color

Name of Father, Husband, Etc.

Remarks

Date Dept.
Date Dept.
Date Dept.
Date Dept.
Date Dept.
Date Dept.
Date Dept.
Date Dept.

Boston Dispensary Registration Card

Form 5. Actual size.

PHILANTHROPY AND THE PUBLIC HEALTH

Conducted by THE NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR.
BAILEY B. BURRITT, General Director.
WILLIAM H. MATTHEWS, Director,
Department of Family Welfare.

Please address items of news and inquiries regarding Philanthropy and the Public Health to the New York Association for improving the Condition of the Poor, 105 East Twenty-second street, New York City.

HOW WE KEPT THE KIDDIES OUT OF DANGER

* * *

Summer Camps for Children as Safeguards Against Infantile Paralysis

BY JONATHAN A. RAWSON, JR., Executive Secretary New York Association for Improving the Condition of the Poor.

It was a trying situation which last summer confronted New York City's philanthropic organizations which give outings at the beach or in the country to the mothers and children of the tenements. Never was there greater need for fresh air work; yet never were there greater obstacles in its way. The city was panic stricken by the infantile paralysis epidemic. All the wealthy, the well-to-do, and the moderately well-to-do—that is, all who could in any way afford it—sent their children out of the city as rapidly as they could break through the quarantines imposed by various state and city authorities.

One group of guests at Gray Mouse Farm. There is more fun and freedom here in a day than in a month in the city streets.

The poor could do nothing of this sort. Their only vacations are such as are given to them by the various fresh air funds. Many thousands of the city's poor benefit for a few days, and in some cases for several weeks, by summer outings which are arranged for them by these agencies, thanks to the generosity of thousands of kindly disposed people inside the city and out.

But the infantile paralysis epidemic changed all this, or at least seriously threatened to do so. Tenement mothers became panic stricken and refused to let their children go out of the house. Children were forbidden by the health authorities to congregate in public places, play streets were closed, picnics were postponed, Sunday schools closed, and everything possible done to prevent the little people from herding together. Country fresh air homes refused to receive city children as usual. Summer camps were closed and every possible thing was done, apparently, to keep tenement waifs as closely confined as possible in their own homes and streets, where the danger of infection was greatest of all. Just at the time when these children should have been protected as carefully as possible from the disease they were forced to stay where the danger of contracting it was greatest.

The "Gray Mice" discover the Hudson River. No thought of infantile paralysis here.

For a time the fresh air agencies seemed entirely helpless. What could they do? Many of them simply could do nothing whatever, because the only places to which they could send their children were closed. This was the case in the country districts surrounding New York city. The problem of getting the children outside the city through the quarantines was alike an attempt to rescue the citizens of a besieged city without their capture or discovery by the enemy. The situation was a most distressing one, for it semed that all the social welfare forces which work so persistently for better health conditions in New York were face to face with the necessity for admitting that they were utterly powerless to cope with the situation. Nor can it be denied that this was actually the case, and that,

The boys' camp at Southfields, where boys from the tenements have nothing to do but eat, sleep, play, and grow.

if next summer another infantile paralysis epidemic were to break forth, the same situation would develop.

Typical of the troubles which confronted the fresh air agencies were those of the New York Association for Improving the Condition of the Poor. The handicaps imposed on the association were identical with those imposed on other agencies, yet fortune seemed exceptionally kind to the association. In the first place, its big fresh air headquarters, Sea Breeze, is on the beach at Coney Island, within the city limits, and is under direct control and observation of the city health authorities. No state health department or officious local board stood between the children and Sea Breeze. Thus the children could come and go from Manhattan to Sea Breeze with no quarantine to hold them up. They could first be carefully examined and their good health assured before they were sent to the beach, and, while there, could be under the daily observation of competent nurses and physicians. So Sea Breeze remained open throughout the summer. In August, when the epidemic was at its worst and there was a crying need for relief for the indirect sufferers of the epidemic—the children who had been kept in their homes under quarantine, although not themselves afflicted—one of the play pavilions at Sea Breeze was turned into sleeping quarters for small boys, so that the mothers and younger children could have more room in the main building. By this change the capacity of the home was increased to nearly 400. The work was continued late in September, or as long as the weather would permit.

Enjoying Sea Breeze, with its sunshine, shade, cool sand, cooler surf, playgrounds, bountiful meals, and a cool, clean, quiet place to sleep.

A vacation at Sea Breeze works wonders for a family like this.

Off to Sea Breeze, away from the stuffy tenements and hot city pavements.

Early in July the Association for Improving the Condition of the Poor, cooperating with the New York *Globe*, established a nutrition camp for boys at Southfields, N. Y. By a remarkable piece of good fortune the camp was opened, and its first group of 150 guests was sent to Southfields, just before the health authorities in the suburban districts began to get busy. By the closest sort of cooperation with the health authorities in the city and out, by the signing of many certificates and by virtue of many examinations, the camp was kept open continuously to October 1, having a total of 431 guests, who stayed an average of 19 days.

The association also had last summer two other new fresh air homes. One of these at Germantown, N. Y., was for adults in need of country convalescent care, and the other, at Saugerties, N. Y., was for young girls who, like the boys at Southfields, needed special medical observation and treatment which they could not get at the larger fresh air headquarters.

There was little difficulty in opening and maintaining Cherry Acres, the Germantown Home, but it was not so easy a matter to get the little girls to Gray Mouse Farm at Saugerties. However, 57 of them did get there and had a total of 1,260 days' outing, although the Farm was not ready for them for this purpose until the summer was partly over.

The total number of days' entertainment given by the association in these various homes last summer was 55,605, a large increase over previous records. In 1915, for instance, the number of days' entertainment was 42,228, and the year before that it was 39,919, an increase of 2,309 days.

The summer's experience brings to light a tremendous problem for the city's health agencies, municipal and private, which still remains to be settled. Whether they will be able to settle it before physicians learn how to deal with poliomyelitis, no one can say. While efforts will be made to bring about the desired conditions before that disease is successfully combated, it is doubtful if it can be done.

Dr. L. B. Cline, superintendent of the Christian Hospital, Vigan, P. I., is a new subscriber to THE MODERN HOSPITAL. The Christian Hospital is maintained by the Foreign Christian Missionary Society, and the record of persons treated at the institution totals 20,000 a year. A training school offering the course prescribed by law in the Philippines is conducted by Mrs. Cline. The same society operates the Mary Chiles Hospital at Manila and the Read Memorial Hospital at Laoag.

A 21-bed private hospital has just been opened at Westminster, S. C., by Drs. J. H. Johns and W. A. Strickland.

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

Citrus Fruits in the Hospital

A food to be of dietetic value does not necessarily furnish energy or build tissue. The sugars in fruits do furnish some energy, but fruits perform other functions equally important. They introduce into the system salts and organic acids, which are beneficial to the blood and react favorably upon the secretions. They are refreshing, stimulate the appetite, and serve as a means of introducing water into the body.

Citrus fruits are well adapted to our needs, even though they have a low caloric value, as they are nearly always available and they are agreeable to almost everyone. The principal acid of these fruits is citric acid, though phosphoric and malic acids are also present. Grape fruit contains considerable acid, although not as much as the lemon; it has a characteristic flavor, which makes it very appetizing, especially for breakfast. Oranges have very much less acid than either lemons or grape fruit, but they have a much higher percent of sugar.

Because of their pleasant and distinctive flavor, these fruits may be used in a great variety of ways, a feature which makes them particularly valuable in the sick room. For the patient requiring much liquid, a monotonous routine may be avoided by the use of lemon or orange juice. Everyone is familiar with lemonade and orangeade, and a combination of the two juices. But a stimulating drink may be made which is very pleasing to the patient by use of a combination of lemonade and weak tea; albumin drinks are made more palatable by the addition of either lemon or orange juice. For these same patients, whose diet must be very simple, ices made from orange or lemon juice and a syrup of sugar and water are refreshing and an agreeable change.

Gelatin desserts, also, made from these juices and a syrup of sugar and water, and thickened with gelatin or Irish moss, are a great help in the diet of the sick. More nourishing provision is made by preparing eggnogs in various ways and flavoring them with orange or lemon juice. If properly prepared, these will not curdle.

For the patient who can have a less restricted diet, numerous custards, souffles, and puddings may be prepared with lemon or orange juice as the flavoring. Grape fruit and oranges combine well with each other and with many other fruits, or with celery or with nuts in making salads. The juice of oranges, lemons, and grapefruit has been considered for many years as the best remedy for scurvy in adults. It is now being used almost universally in the feeding of infants to prevent scurvy. When sterilized milk is used, orange juice is given in practically every instance. For one with no desire for food it is frequently found that grapefruit or orange will stimulate an appetite for food. So few fruits are available for the diabetic patient, that we consider grapefruit almost a necessity for them. A slice of lemon held in the mouth will often remove the disagreeable taste due to a coated tongue. In fact, no other fruits are so generally used in the hospital as the citrus fruits.

Food Selection for Rational and Economical Living[1]

BY C. F. LANGWORTHY,
Chief, Office of Home Economics, State Relations Service, United States Department of Agriculture.

[Concluded from November issue.]

For the guidance of the food expert (dietitian or other specially trained worker) dietary standards have been proposed which show the proportion of protein and energy which the daily diet should supply. Such dietary standards are designed as guides for home and institution management, and should not be confused with expressions of physiological requirement. In quantitative discussions and in comparisons, one should always distinguish clearly between "food purchased," "food eaten," and "food digested," and should take the further precaution not only to compare like things, but to compare them on a uniform basis. The basis most often selected for comparing dietaries is the food or diet of "a man in the period of full vigor weighing 150 pounds and engaged in moderate to active muscular work," and factors for computing the requirement of men, women, and children in other circumstances in terms of this standard have been worked out. These precautions should always be taken in comparing the results of dietary observations, experiments and studies; otherwise, avoidable confusion results. If they are so taken into account, many of the seeming differences of opinion which sometimes lead to divergent conclusions will be found nonexistent. When all precautions are taken for accuracy in comparisons and discussions, differences in the amounts of protein and energy found in the diet of different persons and different races are still apparent, as well as differences of opinion as to the amount of nutrients and energy required or desirable. Such differences of opinion, however, are not so great as one might expect, and one may well conclude, from a survey of the dietary studies of different races available, that persons of like age, sex, and work, given an opportunity to select, instinctively choose diets showing, when reduced to uniform terms, a decided similarity with respect to the protein and energy they supply. This is not surprising when one recalls that all reasonably normal men possess bodies and possibilities of using them which do not vary within such very wide limits. A steam engine of a given size and type will require the same amount of fuel of a certain kind in Asia as would a duplicate engine in America for the production of a like amount of power, and why should this not be true of the human engine as well?

A large number of dietary studies made in the United States, considered in comparison with the other large number made elsewhere, have led to the conclusion that not far from 100 grams of protein per day, along with 3,000 to 3,500 calories of energy, represents, for the typical man (in the period of full vigor, engaged in moderate to active muscular work), the quantities which the food purchased should supply. We have not as yet been able to test with any degree of accuracy the protein optimum, though data on the subject are abundant enough to indicate that the suggested value represents common race habits. With

[1] By permission of the Scientific Monthly, where this valuable paper was first published.

energy the case is different, for it is possible with the respiration calorimeter to test the accuracy of the value suggested in any given dietary standard. Such tests show that the values given above are in accord with actual measurements of the energy expenditure of individuals under the specified circumstances of work and rest.

A consideration of the results of American experiments and other data has led us to conclude that with our ordinary food habits, involving, as they do, the use of a considerable variety of foods in reasonably liberal quantities, one is justified for many purposes in discussing dietetics on the basis of energy only, since a diet which supplies 3,000 to 3,500 calories of energy per man per day, as ours so very commonly does, almost inevitably supplies the needed protein, ash, and other constituents also. Particularly is this the case when one takes pains to include in the diet a reasonable amount of milk, green vegetables, and fruit. If we accept this conclusion as rational, it enables us to go ahead without controversy until the time comes when we have more abundant knowledge of the kinds and quantities of protein we need, of the functions of mineral elements and the best ways to meet our body needs for them, and of the nature of vitamines or other regulatory substances.

It is no new thing to realize that, although empirical knowledge and experience may lead to really good results, it is easier to achieve them if there is also special knowledge and training. Thinkers and writers in the past have given their time and attention to the problems of dietetics, and have left us much which is interesting and useful. That we can discuss the problems more fully and more adequately at the present time is due to the great progress made in biology, physics, chemistry, medicine, and other sciences. The question comes, how can we best translate the results of scientific investigation for the housekeeper's benefit. It was natural enough that at first we should try to do this in laboratory terms and expect the housekeeper to learn them. As a result, books, pamphlets, charts, etc., have been provided for her which in many cases cannot be understood without special training, and for this time and opportunity are only too often lacking. Later has come the realization that, while the specialist who follows home economics as a profession needs wide and varied technical knowledge, the woman who practices the art of housekeeping chiefly needs, aside from the skill which she gains by experience, simple statements of facts and definite methods by which she may obtain desired results. With this realization has come the attempt to formulate more simple and pedagogically correct methods of instruction, and to provide illustrative material in pictorial or graphic rather than tabular and diagrammatic form. It starts with materials and facts familiar to the housekeeper, and, as far as possible, applies standards which have been tested in practical as well as experimental use. Its advocates believe that, by thus bringing practice and theory into direct and vital connection, their teaching is more likely than either the scientific or the empirical method of instruction not only to result in more rational housekeeping, but also to supply the element of culture which raises any labor to an occupation.

In its studies of methods for imparting information through its extension and other activities, the Department of Agriculture has endeavored to classify common foods in a way corresponding to their distinctive functions in nutrition. The division must be more or less arbitrary, for some foods could go almost equally well in two or more groups. Thus milk, which is a general food, is included with the protein foods because it is a valuable source of this nutrient. Bread is a carbohydrate food, a protein food, and an ash-yielding food, but it is classed as a carbohydrate food because its most obvious constituent is starch, and because we use it in the same general way as we do starchy foods like potatoes. The classification as now arranged consists of five groups, and it is the understanding that each of these groups should be represented, if not at every meal, at least once a day, and that, if an excessive number of food materials from any one group are used in the course of a day, the result is likely to be unsatisfactory from the standpoint of rational dietetics or of taste.

SOME COMMON FOODS GROUPED ACCORDING TO THEIR CHARACTERISTICS

(All five groups should be represented in the diet every day.)

Group 1 Foods characterized by protein	Group 2 Foods characterized by starch and similar carbohydrates	Group 3 Foods characterized by fat	Group 4 Foods characterized by mineral substances and organic acids	Group 5 Foods characterized by sugar
Lean meats Poultry Fish Oysters, etc. Milk Cheese Eggs Dried legumes Nuts And other protein rich foods	Bread Crackers Macaroni Rice Cereal breakfast foods, meals, and flours And other cereal foods	Butter Cream Lard and other culinary fats Salt pork Bacon Chocolate And other fatty foods	Spinach Peas Lettuce Potatoes Turnips Apples Oranges Berries And other vegetables and fruits, raw or cooked	Syrup Honey Jellies Dried fruits Candy And other sweets

The groups may be described in terms of the dietitian as follows: (1) foods in which protein bears a higher proportion to fuel value than it does in the well-chosen diet as a whole; (2) those in which fuel value is high in proportion to protein, owing chiefly to the presence of much starch; (3) those in which fuel value is high, owing to the large percentage of fat; (4) those whose chief value is mineral constituents and vegetable acids (the latter important from the standpoint of flavor as well as of body needs); and (5) those which (like the foods in groups 2 and 3) have a high fuel value, but in this case due to the presence of sugar. From the standpoint of fuel value only, it is obvious that groups 2 and 5 could be combined. From the standpoint of the well-chosen and palatable meal, on the other hand, they should be kept distinct, since sugar is frequently as important as a flavor as it is as a food.

In housekeepers' terms the groups may be described as: (1) flesh foods (except the very fattest), milk, cheese, eggs, and such meat substitutes as dried beans, peas, and the other legumes, and some of the nuts; (2) starchy foods; (3) fat foods; (4) watery fruits and vegetables (excluding dried legumes and fruits which have been dried or combined with much sugar; and (5) sweets.

The grouping is easy to remember, and provides a guide for the housekeeper in the selection of food materials for a meal or for a day's ration, and also a means of checking up and criticising the meals which have been served.

It is obvious that, while some foods belong clearly to one group—sugar and honey to group 5, for example, and liver and veal (which contain very little fat) clearly to group 1—other foods are difficult to classify. Mutton, for example, is a protein food which might also be classed as a fat food, and dried navy beans might be classed as a protein and also as a starchy food. To cite another example, potatoes, which are an important source of mineral substance, with some organic acid, are included in group 4 rather than in group 2, which at first thought

might seem the more logical place for them when we recall that they are so generally used as a source of carbohydrate (starch). In general, however, the system of groupings will be found helpful.

The following sets of menus contain none but wholesome and desirable food materials. These food materials, however, have been poorly combined so far as the protein, fat, and carbohydrate which they provide are concerned. The first set is characterized by much protein, the second set by much fat, and the third set by much carbohydrate.

MENUS WITH PROTEIN PREDOMINATING

Breakfast.—Cereal cooked in milk, chicken hash with egg, popovers, butter, and milk as a beverage.

Dinner.—Dried bean puree, halibut steak, potatoes scalloped in milk, tomatoes stuffed with chopped beef, bread and butter, and frozen custard with nut cookies.

Lunch or supper.—Baked beans, nut bread and butter, old-fashioned rice pudding, and a glass of milk.

The following shows a day's menus (not at all unusual or peculiar) in which fat foods predominate.

MENUS WITH FAT PREDOMINATING

Breakfast.—Oatmeal with cream, sausage, and corn bread and butter.

Dinner.—Cream of tomato soup, mutton chop with creamed potatoes, greens cooked with bacon or pork, bread, and suet pudding with hard sauce.

Lunch or supper.—Creamed salmon, lettuce with oil dressing, tea biscuits and butter, pumpkin pie, and a cup of chocolate.

The following is an example of three meals of combinations common enough, but in which carbohydrate (starch and sugar) predominates:

MENUS WITH CARBOHYDRATE PREDOMINATING

Breakfast.—An orange, followed by corn cakes with maple syrup, and bread or toast and butter.

Dinner.—Meat pie and baked potato, green peas, bread and butter, and cottage pudding with chocolate sauce.

Lunch or supper.—Rice croquettes with jelly, rye bread and butter, baked apples, and sugar cookies.

The food and fuel value of the menus served are given below, the portions served being of the average and usual size for an adult.

Described in technical terms, for the benefit of the dietitian, the first day's menu supplies 4.2 grams of protein per 100 calories of energy, or 2,356 calories of energy per 100 grams of protein; the meals of the fatty menu, 2.4 grams of protein per 100 calories of energy, or 4,120 calories of energy per 100 grams of protein; and the meals of the starchy (carbohydrate) menu, 2.5 grams of protein per 100 calories of energy, or 4,081 calories of energy per 100 grams of protein.

Speaking in terms of the housekeeper, into the first day's menu there went sixteen food materials other than fresh fruits and vegetables, of which nine were from group 1. Milk entered into or made up ten dishes; eggs, four; nuts, two; and beef, fish, chicken, dried beans, and dried peas, each, one. Into the second day's menu went nineteen food materials other than fresh fruits and vegetables, of which nine were distinctly fatty foods (lard, oil, butter, cream, salt pork, and others), while the meat, fish, and even the cereal were those which contained comparatively high percentages of fat. Into the third day's ration went eleven food materials, of which six were starchy or sugary (rye, wheat, corn, rice, maple syrup, cane sugar). Thus, by unwise choice, one characteristic of the well-chosen diet—a right proportion between protein and fuel—was omitted.

It is hardly necessary to say the different combinations of vegetables and fruits may be made in which the proportion of mild vegetable acids and ash to the other nutrients in the total diet may vary widely—a fact which could be shown by similar groupings of food materials into menus.

THE COMPOSITION OF THE NUTRIENTS AND THE ENERGY SUPPLIED BY THE MENUS USED FOR ILLUSTRATION

	Weight of edible food served, grams	Protein, grams	Fat, grams	Carbohydrates, grams	Fuel value, calories
Protein meals—					
Breakfast	471	36	50	54	810
Dinner	772	55	64	120	1,288
Lunch or supper	639	33	38	105	894
Total	1,882	127	152	279	2,992
Fatty meals—					
Breakfast	353	24	69	58	949
Dinner	617	33	88	108	1,356
Lunch or supper	621	29	83	98	1,259
Total	1,591	86	240	264	3,564
Carbohydrate meals—					
Breakfast	509	15	32	168	1,020
Dinner	529	40	33	133	989
Lunch or supper	376	14	27	127	807
Total	1,414	69	92	428	2,816

To benefit by well-selected menus, each member of the family should eat all the kinds of food provided, for, if a person habitually eliminates some particular sort of food, as fruits and green vegetables, he has failed to take advantage of the housekeeper's selection, no matter how good it may be. One must, speaking broadly, relish all kinds of food, which is a matter of good habits and good manners as well as of physiological importance.

The housekeeper who will learn the simple classification of foods mentioned above can easily see the relation of the different groups of foods to the character of the meals she provides. She need only go a step further to realize that it is wiser to provide dishes varied in character for a given meal, and also meals varying from those of the same day and varying from day to day. She can do this easily by taking care to see that the different food groups are represented in at least two of the three meals she serves each day. The more extended her information as to market facilities, the wider her knowledge of standards of quality, the wiser her selection of foods, and the greater her skill in preparing and cooking them, the easier it will be for her to plan meals by this or any other method which will be reasonable, economical, and satisfactory, as well as adequate.

She can understand also that it is more important to apply the principle outlined to a considerable period of time than to a single day. A departure from the ideal for a day or so means little, for it can be made up the next day or the next week, while an irrational diet, if followed for a long period, may lead to marked disturbance or even serious illness.

The housekeeper need not go into the reasons for all these things which she has to attend to, but she will be quick to see in a general way the point of it all in so far as it concerns her problem of preparing suitable meals for her family. She need not know the theories of electricity to use and appreciate electric light, nor need she be burdened with the theories of dietetics, if she is willing to

trust the conclusions others have reached and apply them to her particular problems.

She naturally wishes for some tangible proof that her efforts to provide a rational diet as part of her good housekeeping are meeting with success. The general condition of her family should offer her fairly good evidence. Thus, it seems fair to say that the child who continues to approximate the average for his years with respect to weight and height, who is apparently normal in respect to work and play, and who exhibits none of the obvious symptoms of ill health, cannot be very faultily fed, any more than can be the adult who remains in fairly constant weight for long periods of time, making due allowance for the seasonal variation (such as the small loss in weight in summer and the small gain in winter), and has other attributes of good health. As one reaches middle life it is wise to be more abstemious in matters of diet, as in other things, for the body is "slowing down" and becoming less active, and so needs less food. If, in any case, things do not seem to be as they should be, advice should be sought from a physician or other expert, as he alone can judge whether there is an actual departure from normal and whether it is due to diet or to some other cause.

Experience shows clearly that the experimental and the professional worker can be more helpful to the housekeeper than heretofore. The Department of Agriculture is doing what it can to accomplish this important end. The method for translating technical matters of diet into housekeepers' terms, which is outlined above, is an attempt to do this. The method can be modified as experience indicates is desirable, and the subject-matter can be amended to keep pace with the results of investigation and experiment.

The Chemical Composition of Commercial Glucose and Its Digestibility

BY DR. J. A. WESENER, AND PROFESSOR G. L. TELLER, of the Columbus Laboratories, Chicago, Ill.

The term commercial glucose has been applied to a product obtained by the action of certain catalytic agents upon refined starch until the starch has lost its identity as such and has been converted into a series of products, consisting of d-glucose, maltose, and different forms of dextrin. The dilute liquid thus produced is clarified by passing over boneblack, and is then carefully evaporated, either to a solid substance or to a syrupy condition known as glucose syrup. The glucose thus produced in this country is made entirely from corn starch, and for this reason the syrup is designated as corn syrup. It consists of about one-fifth of its weight of water, very minute traces of nitrogenous bodies, a very small amount of ash, and a group of carbohydrate bodies, consisting of dextrose, maltose, and probably several forms of dextrin, and paralleling closely the bodies of a similar nature obtained by the action of malt diastase and other diastases upon starch.

There is apparently a border line between the bodies commonly known as dextrin and that known as maltose, which has led to great confusion in the minds of the chemists who have investigated this subject, largely because of the difficulties attendant on the separation of such bodies from maltose on the one hand and the different forms of dextrin on the other, and the consequent confusion with these bodies and with mixtures of them. The confusion of ideas concerning glucose syrup has been participated in by a large number of investigators, extending in time over a period of twenty to thirty years, and has led to the introduction into the literature of such terms as "gallisin," "iso-maltose," "malto-dextrin," and others.

The voluminous literature on this subject appears to have been reviewed completely by various writers without coming to any definite conclusions as to results. The latest edition of such an authoritative work as Allen's "Commercial Organic Analysis" (4th ed., vol. I, 1912), dismisses the matter with the following brief summary:

"Gallisin, as hitherto obtained, is not a definite compound, and it appears advisable only to retain the term as synonymous with unfermentable matter. The whole question of the structure of starch, the nature of the various dextrins and of iso-maltose still remains a vexed question in carbohydrate chemistry, and the utmost confusion exists as regards the subject. (The reader is referred to Ling's article on starch in Sykes' 'Text-book of Brewing' (1907)."

A review of the earlier literature is quite fully set forth in the third edition of the same work, published in 1898, and in Brown's "Handbook of Sugar Analysis" (1912) under the title of iso-maltose. A clear and concise statement of what appears to be the general understanding of these terms, as they are used, is embodied in the following definitions, as given in the Century Dictionary and Encyclopedia:

"Gallisin, in chemistry, a substance analogous to dextrin, obtained by fermenting with yeast a solution of commercial glucose or starch sugar and adding to the residual liquid absolute alcohol in excess. Gallisin is precipitated as a white powder, of faintly sweetish taste, hygroscopic, dextrogyrate, incapable of fermentation and yielding dextrose by prolonged heating with dilute sulfuric acid. Probably identical with iso-maltose, $C_{12}H_{22}O_{11}$ (Sadtler 'Handbook of Industrial Chemistry,' p. 178).

"Iso-maltose, a substance formed together with maltose from starch on diastatic digestion. It has been produced synthetically from dextrose, does not ferment, and is isomeric with maltose $C_{12}H_{22}O_{11}$.

"Malto-dextrin, a variety of dextrins or starch-gum, produced in 'mashing' brewers' malt as an intermediate product between starch and fermentable glucose. Its claim to be considered a distinct substance is not clearly established."

The presence of so-called gallisin or iso-maltose in glucose has been attributed by some authors to a reversion process brought about by the action of dilute acid upon dextrose during the process of manufacture. This has led to an apparent misconception of the significance of its presence, and has brought in question the value of this portion of glucose as an article of food. One recent writer has gone so far as to state that this body is not only unfermentable, but is not hydrolyzable by enzymes, while Allen states, "by heating with dilute sulfuric acid for some hours, gallisin yields a large proportion of dextrose, but its complete conversion has not so far been effected."

It has been the purpose of the work on which this article is based to clear up some of these points, especially with reference to the assumed presence of an unfermentable body which is not hydrolyzable by enzymes and which consequently would not serve as an article of food.

[To be continued.]

A Change of Work

Miss Ruth Wardall, who has been in charge of the home economics department of the Iowa University, is taking a year from her work there to be with Dr. Mendel in his experimental work at the Sheffield laboratories. Miss Wardall is very enthusiastic over what she is doing and what she hopes to accomplish. Knowing both Miss Wardall and Dr. Mendel as we do, we know there is good reason for this enthusiasm.

The University Hospital in connection with the University of Iowa has established a metabolism ward, in which they are doing very interesting things. Miss Sawyer, a graduate of the University of Illinois, is doing the dietetic work in this ward.

INDUSTRIAL WELFARE

The Occupational Hazard in the Chemical Industry—The Need for Prophylaxis[1]

BY J. W. SCHERESCHEWSKY, Surgeon U. S. P. H. S.

We are observing in this country, as a part of the general campaign for the improvement of the public health, an awakening on the part of the industries to the necessity for safeguarding life and limb. That, in the past, we may be charged with indifference to the physical welfare of the worker arises from the fact that, in the midst of our unparalleled industrial expansion, we have somewhat lost sight of the man behind the machine. Production has been our aim; we have been prodigal of the life and health of our workers as we have been of other less important natural resources.

Yet we are now rapidly coming to a lively sense of the social and economic importance of protecting the health of workers. In former years the chemical industry has been accused with neglecting this paramount duty. The occasion, therefore, of holding this symposium is a sign of the happiest augury for future improvements in this respect. Indeed, the necessity for adequate protection of the health of chemical workers is a self-evident proposition, for, aside from the ordinary hazards to health inseparable from industrial life, there are many specific hazards provoked by the nature of the substances dealt with. The great German hygienist, Weyl,[2] in writing of the chemical industry, thus characterizes it: "Compared with the chemical industry, there is none other in which the workers may be exposed to such varied and manifold injuries to health."

The chemical industry, together with its allied branches, is so extensive that in the time at my command I can give but little more than a bird's-eye view of the possibilities of damage to the health which occupation in this country may cause. This industry has made gigantic strides in our country. Its colossal development of the past promises to be transcended by its future growth. A summary dated September 14, 1916, of the Census Bureau concerning the general chemical and allied industries gives the following comparative figures, which show the development of this industry in 1914 as compared to 1909. In that year the total value of the products of the chemical and allied industries was $800,722,356, whereas in 1914 the value of the products was $1,228,403,984, an increase of $427,631,628, or 53 percent. The forthcoming extension of the manufacture of coal-tar products, as well as European conditions, seems to portend an accelerated expansion of this industry in the future.

In the past the chemical industry has been but little studied in this country from the standpoint of industrial hygiene. Chemical works are usually located on the outskirts of communities; the general public has always been convinced of the mysterious and alchemistic character of chemical processes; many processes are so-called trade secrets, and therefore jealously guarded by manufacturers; many branches of the trade have been surrounded by mystery. Notwithstanding these conditions, which tend to discourage investigation, there have been certain investigations in this country, notably by the Illinois Commission on Occupational Diseases and the New York State Factory Investigation. Abroad, especially in Germany, conditions in the chemical industry have been more thoroughly studied, although even there, with the necessity for knowledge of industrial conditions required by the operation of health insurance laws, information concerning health conditions in the chemical industry is not so full as in other occupations. While, therefore, our knowledge of the subject is not as definite as is desirable, we may outline at least the main hazards to health to which chemical workers are subjected.

We have, first, the ordinary hazards which may arise in any industrial environment, and, second, specific hazards caused by the nature of the substances handled.

ORDINARY HAZARDS

The ordinary hazards to industrial health are those caused by the presence of darkness, dampness, stagnant air, exposure to extremes of cold and heat, long hours, fatigue, and monotony.

DEFECTIVE ILLUMINATION

While the chemical industry makes but little demand for close eye work on the part of its workers, the fact should not be lost sight of that dangerous substances are handled, the establishments are full of unexpected stairways, open vats containing caustic or corrosive liquids, dangerous substances are concerned in many packing and loading operations. Consequently adequate illumination is required to assist the worker in escaping accidents or injury to the health. Adequate illumination is, moreover, an important sanitary aid even in industries which involve but little exposure to eye strain. The generous flood of light has a stimulating psychological effect; production is increased; dark nooks and corners are illuminated; collections of dirt and rubbish are revealed, which otherwise would lurk unnoticed. Therefore adequate illumination is an important adjuvant to the sanitation of industrial establishments. Yet, in the investigation of the chemical industry made by the New York Factory Commission,[1] we find it stated that lighting was found inadequate in 64 percent of the establishments visited.

VENTILATION

While there is some divergence still as to the harmful factors resident in poor ventilation, all are agreed that an abundant supply of fresh air is a necessity for the worker. It makes but little difference if we base our standards of ventilation on the content of carbon dioxid of interiors, or if we consider the physiological needs of the body in the way of removal of the body heat as it is generated, together with an adequate stimulus to the skin by moving air currents; we cannot secure healthful conditions with respect to any of these factors except by an adequate air supply of the proper temperature and relative humidity. Reasonable provisions for ventilation are, therefore, necessary for the maintenance of health in any industry. They become doubly so in the chemical industry, where the numerous poisonous materials, dusts, fumes, and gases peculiar to the processes involved require special attention to ventilation. Yet in the report of the New York Factory

[1]Read before the symposium on Occupational Diseases of the American Chemical Society, New York city, September 28, 1916.

[2]Th. Weyl, "Handbuch der Arbeiterkrankheiten;" Jena, 1908, G. Fischer. p. 183.

[1]State of New York, Second Report of the Factory Investigating Commission, 1913, vol. II, page 465.

Commission, just referred to, we are told (loc. cit.) that provision for mechanical ventilation was found in but 41 out of 259 chemical plants, or about 11.4 percent. Of course, in many instances the nature of the processes and the relative size of buildings may make such provisions superfluous; yet there can be no doubt that the chemical worker is too frequently subjected to the ill effects of poor ventilation.

EXTREMES OF HEAT AND COLD

The necessity for tending furnaces of various kinds subjects many chemical workers to the effects of extreme heat, often alternated with cold. While workers subjected to such conditions, often intolerable to the casual visitor, when asked "how they stand the heat," reply that they grow used to it, it must be remembered that tolerance to any injurious condition by no means constitutes a state of physiological adaptation. In young and healthy adults, living otherwise hygienic lives, we are often surprised at the little harm apparently resulting from exposure to intrinsically unhealthful conditions, yet a short period of lowered resistance, some temporary hygienic fault in the manner of living, some slight excess when off duty, is enough to cause the factor of safety to be exceeded, with resulting injury to the health. It is well known that exposure to great heat throws increased work on the heart and blood-vessels, interferes with nutrition, increases fatigue, diminishes endurance, and renders the individual more susceptible to diseases of the respiratory system. While exposure to great heat is inherent in many industrial processes, the amount of exposure is often needlessly great, the degree of heat unreasonable. Problems of heat mitigation may be said to constitute a branch of industrial hygiene too extensive to be entered on here. Suffice it to say that workers are often subjected to heat when by due forethought the necessity for and the degree of exposure might be greatly reduced.

LONG HOURS

The continuous maintenance of bodily efficiency requires that the worker return to his work completely recuperated from the previous day's fatigue. It is difficult to fulfill this condition when hours of labor have been unduly prolonged. Many instances of long hours of work in the chemical industry exist. This is especially true in continuous processes in which the working week consists of at least seventy-two hours, and often eighty-four. Thus in the census bulletin,[1] on the general chemical industry for 1909, the prevailing hours of labor for some 20 percent of the chemical workers were seventy-two hours or more weekly, 29 percent worked more than sixty hours weekly, while in the case of only 43 percent of the workers were the weekly hours less than sixty. It is evident, therefore, that the hazard of prolonged working hours is present in the chemical industry to a considerable degree. (Long hours also increase the risk of industrial poisoning because of the extended exposure and the carelessness due to failure of attention from fatigue.)

FACTORY SANITATION

The absence of proper facilities for factory sanitation, such as a pure drinking water supply distributed in sanitary drinking fountains, sanitary toilets, ample washing facilities, separate lunch rooms, and the like, exert an untoward influence on the health of the factory personnel. We hear much of the indifference or carelessness of workers in matters of personal hygiene, yet it is the duty of every progressive manufacturer to provide ample facilities for the care of the body. This is especially true in the chemical industry, where so many irritating, corrosive, poisonous, and dusty materials are handled, yet the same report of the New York Factory Commission referred to shows that the general sanitation of chemical plants is sadly neglected. Attention to proper factory sanitation pays, not only so far as the individual worker is concerned, but also in the case of the community at large. It is true that provision for good factory sanitation must be combined with education of the personnel, especially of the unskilled, as to the use of these facilities. Such education, however, not only promotes the intelligent use of these provisions, but also raises the sanitary standards of the community, for the reason that the worker soon learns to apply to his home life what he has learned in the sanitary factory.

SPECIFIC HAZARDS

Apart from the ordinary industrial hazards just enumerated, the chemical trades obviously present certain specific hazards arising from the nature of the materials handled. These hazards consist of the effects upon the body of irritating or poisonous dusts, fumes, and gases. Dust and fume have been characterized by Sir Thomas Oliver, in his plenary address before the Fifteenth International Congress on Hygiene and Demography as the "foes of industrial life." Now, the chemical worker may be exposed, according to the branch of industry in which he is engaged, to practically any one of the entire list of industrial poisons published in Bulletin 100 by the Federal Department of Labor. While highly poisonous substances are handled daily with but little danger in chemical laboratories, it should be remembered that in the chemical trades workers, especially unskilled workers, have but little idea, as a rule, of the nature of the dangerous character of many of the materials with which they come in contact. This point has been repeatedly emphasized by various investigators. Acute poisonings are fortunately rare; in such cases the relation between cause and effect is usually self-evident. Who but an instructed worker, however, would correlate the gradual onset of weakness, impulsive laughter, uncertainty of movement, inability to go down hill without running, or inability to walk backward, with chronic manganese poisoning; or would ascribe the gradual clouding of his vision to long-continued exposure to weak fumes of nitronaphthalin?

Without going into exhaustive detail, I will therefore attempt at this point to discuss briefly the injurious effects on the body of certain well-recognized classes of chemical compounds. Rambousek[1] states that industrial poisons, from their action, may be grouped into three general classes:

1. Poisons which act superficially—i. e., which cause gross anatomical lesions in the tissues with which they come in contact. To this class belong especially irritant and corrosive poisons, such as the caustic alkalies and mineral acids.

2. Blood poisons—i. e., poisons which are absorbed by the blood, and change it. Such change affects either the coloring matter of the blood with which certain poisons (such as carbon monoxid) form definite chemical compounds, or the blood corpuscles themselves can be altered or destroyed, as, for instance, by benzol.

3. Poisons with definite internal action, a so-called remote or specific effect. To this class belong the poisons which, on absorption, act upon definite organs or tissues

[1]Thirteenth U. S. Census, 1910; manufactures, 1909, statistics for the manufacture of chemicals and allied products.

[1]Rambousek, "Industrial Poisoning," Legge's translation, 1913, page 158.

in a specific manner. Lead is perhaps the most common and best known of this type of poison.

While this grouping does very well as a rough means of classification, it is well to remember that some poisons display two or all of these modes of action. As industrial poisons may be absorbed either as solid substances, as liquids, or as gases, we may also classify them according to their physical characteristics—i. e., poisonous dusts, poisonous liquids, and poisonous fumes. This difference in physical form influences the method of absorption by the body. Poisons taken in in the form of dust are either inhaled or swallowed; liquid poisons, as a rule, may enter the body only through the skin, intact or broken. Gaseous poisons, as a general rule, are absorbed only through the respiratory tract. There is also a certain relation between the amount absorbed and the effects. All poisons are without effect if the dose be sufficiently small. There is, therefore, in each case a minimum dose, which, if exceeded, will produce symptoms. This minimum dose, however, is relative only, as it is often modified by the characteristics of the individual, such as age, sex, and body weight, or his habits, such as in the use of alcohol. We may also distinguish acute, subacute, and chronic poisonings, according to whether the symptoms are produced by the sudden absorption of large quantities, the frequent absorption of moderately large quantities, or the repeated absorption of small quantities.

As the list of industrial poisons, compiled by Fischer and Sommerfeld and published by the Federal Bureau of Labor,[1] mentions some eighty-two substances, all of which are capable of producing poisoning, it is impossible for me to enter into great detail. I must, therefore, content myself with a few general remarks on poisonous gases, liquids, and dusts.

POISONOUS FUMES AND GASES

So far as their action on the body is concerned, these gases may belong to any one of the three groups previously mentioned. In general, we distinguish two types of gases and fumes, the irritating and the toxic. The irritating quality of gases and fumes arises from their ability to attack the mucous membrane of the respiratory tract. If their concentration is sufficient, immediate death may ensue, with symptoms of suffocation. Less concentrated doses attack the delicate lining membrane of the pulmonary air cells, bringing about a condition of acute pulmonary edema or swelling. Doses still less concentrated may cause pneumonia, while repeated exposures to small doses give rise to chronic bronchitis. It seems almost superfluous to mention that the chemical industries offer abundant opportunities for the inhalation of such gases, of which the most usual are the halogens (chlorine, bromine, and iodine) and their acids (hydrochloric, hydrobromic, and hydriodic). The fatal effects of the inhalation of high concentrations of chlorine gas have been illustrated over and over again in the present war. In addition to the above, we must also mention hydrofluoric acid gas, which is more active than all of them in its attack on mucous membranes, including that of the eye, and also sulphurous dioxid, nitric, and nitrous acids, nitrous fumes generally, and finally ammonia.

In regard to nitrous fumes, which, unless due precautions are taken, are so frequently encountered by workers in cleaning out sulphuric acid lead chambers and towers, in nitrating as well as in other industrial processes, their delayed action is worth mentioning. After inhaling a fatal amount of these fumes, the worker may feel but a momentary sense of suffocation, from which he apparently recovers on reaching fresh air, only to be seized several hours later with symptoms of a severe and rapidly fatal edema of the lungs. Apart from the acute effects of the gases just mentioned, there are the harmful results of chronic and repeated exposures to their diluted fumes. This causes a chronic catarrh of the respiratory tract of varying severity. The lowered resistance produced by this chronic inflammation may create a favorable soil for the implantation of the pneumonia or of the tubercle bacillus. In addition to this, acid fumes exert a deleterious effect upon the teeth, dissolving the enamel, and causing them rapidly to rot. This effect of acid fumes is wellnigh classical in the literature; no writer on occupational diseases would consider his book complete without an illustration depicting this effect of acid fumes. This destruction of the teeth is apt to be followed by chronic indigestion.

The following table by Leymann shows the minimum concentration of such fumes causing symptoms:[1]

Name of gas	Rapid and dangerous injury, per 1,000	Bearable for 30 to 60 minutes without grave effects, per 1,000	Trifling symptoms after action for some hours, per 1,000
Hydrochloric acid	1.5–2	0.05	0.01
Sulphurous acid	0.4–5	0.05	.....
Carbonic acid	about 30	6–8	1–2
Ammonia	2.5–4.5	0.3	0.1
Chlorine bromine	0.04–0.06	0.004	0.001
Iodine	.....	0.003	0.005–0.001
Hydrogen sulphid	0.5–0.7	0.2–0.3	0.1–0.15
Carbon disulphid	0.01	0.002	0.001
Carbon monoxid	2–3	0.5–1	0.2

So much, then, for irritating fumes and gases. Passing now to fumes more distinguished by their poisonous than by their irritating action, the following, according to Rambousek,[2] are especially worthy of mention: (a) metallic vapors; (b) arsenical vapors; (d) gaseous blood poisons, which have special action on the hemoglobin of the blood; (e) carbon disulphid; (f) fumes of coal tar and coal-tar products, which have action both on the blood and on the nervous system; (g) certain organic compounds, such as the higher alcohols of the fatty series, wood alcohol, the pyridine bases, acrolein, amyl nitrite, nitroglycerin, camphor, and turpentine. In addition to irritative action, these have also special action on the nervous system.

I am again prevented, through lack of time, from entering into detail here. I will content myself, therefore, with mentioning a few of the most striking examples of each of these kinds of poison. Among metallic vapors, the most poisonous are those of mercury and lead. Among arsenic compounds, arseniuretted hydrogen is the most dangerous, as the inhalation of 1 milligram may produce fatal results. I need hardly remind you that the possibilities for the generation of arseniuretted hydrogen are present whenever hydrogen is generated by the action of acids upon metals containing arsenic as an impurity. In recent years a not infrequent industrial accident has been the generation of this gas by the accidental access of water to ferrosilicon. Phosphorus fumes are distinguished by their ability to cause disease (necrosis) of the jaw bone. Fortunately the match industry, which in the past has been the greatest offender in this respect, has been relieved of this odium in this country by federal legislation against the use of white phosphorus in matches. Among gaseous blood poisons must be mentioned carbon monoxid, hydrocyanic acid gas, and sulphuretted hydrogen. Carbon monoxid, because of its great affinity for the hemoglobin

[1] Professors Th. Sommerfeld and Dr. R. Fischer; Bulletin No. 100, May, 1913, Bureau of Labor, Department of Commerce and Labor.

[1] Thompson, "Occupational Diseases," page 304; New York, 1914.
[2] Rambousek, Hartleben, "Lehrbuch der Gewerberhygiene;" Wien and Leipsic, 1906, page 33.

of the blood (some 200 times greater than that of oxygen), rapidly displaces oxygen from the blood, thus preventing its transport to the tissues. Death thus ensues from oxygen starvation. The action of hydrocyanic acid gas is similar. Sulphuretted hydrogen exerts a reducing action on the blood. Coal tar not only is irritating, but is capable of poisonous action by reason of the volatile aromatic compounds it contains. The most important of these are benzol, xylol, toluol, phenol, and naphthalene. Among coal-tar derivatives the following are especially poisonous: benzol, nitro and nitroso derivatives, and amido derivatives. Of the nitro compounds, nitrobenzol and trinitrophenol may be especially mentioned. Of the amido derivatives, analin is by far the most important. In Germany analin, in spite of stringent regulations, probably causes more industrial poisoning than any other chemical compound, with the possible exception of lead. Many of these coal-tar products are doubly dangerous because they may be absorbed not only by inhalation, but also through the unbroken skin. This latter property arises from the ability of many of them to dissolve fat, to the presence of which the skin owes not a little of its nonabsorbent qualities. Among the volatile compounds of the hydrocarbon series, wood alcohol, which has a selective action on the optic nerve, thus causing blindness, is probably the most important industrial poison.

POISONOUS DUSTS

By far the most important of these is lead. While we must regard the manufacture of lead products as an allied branch of the chemical industry, the subject of lead poisoning is so extensive and important, and lead products enter so extensively into other industries, that it should be the subject of separate treatment. Other harmful dusts are those of the chromates, which attack the skin, producing painful and intractable ulcers (chrome holes); dusts which, by their hygroscopic nature, can produce irritation of the skin and mucous membranes, such as quick lime, calcined dolomite, and the like; arsenical dusts, such as Scheeles green, Schweinfurt green, and Brunswick green; antimony dusts, such as golden sulphid and trioxid of antimony.

While the foregoing is necessarily but the briefest survey of the varied hazards of the chemical industry, I think enough has been said to show the manifold nature of the hazards to which chemical workers are exposed, and the necessity for careful surveillance if unnecessary disease and deaths are to be avoided. The necessity for such surveillance is further emphasized when we consider that but a small proportion of the personnel of chemical establishments consists of skilled workers, the great majority being unskilled workers of foreign birth, who, besides having the most rudimentary ideas of personal hygiene, are ignorant of the nature of the substances which they handle.

Before concluding, some reference, however, should be made to the frequency of illness in the chemical industry. Unfortunately we have practically no data in the United States as to this morbidity. Like others, therefore, I am forced to make use of foreign statistics. So far as the chemical industries are concerned, the best known of these statistics are those published by Grandhomme and by Leymann. Grandhomme's figures refer especially to workers engaged in the manufacture of coal tar products, while those of Leymann refer to workers in a number of branches of the chemical industry. The establishments which furnished these figures operate under the German system of health insurance, and were carefully supervised with a view to reducing the incidence of disease. Grandhomme's figures show that the average number of sick days for each worker annually was 6.73. According to Leymann it was 10.2. Weyl thinks it justifiable to average these figures, and estimates that in Germany the average annual loss through sickness for each worker in the chemical industry would be in the neighborhood of 8.5 days. According to Weyl[1] this would give among 185,820 chemical workers insured in Germany in 1905, an annual time loss of 1,572,037 days. As the number of cases of illness was .88 to each worker, figured on this basis, Weyl calculates that there were 163,822 cases of illness, or, out of 100 workers, only 12 on the average worked through the year without sickness. In addition to illness, there were 10,000 accidents in 1905 in the German industry, of which 122 were fatal. The fatality rate among accidents was, therefore, 1.22 percent. This tends to show a rather high fatality rate for accidents in the German chemical industry, considering the attention that accident prevention has received in that country, for in the state of Pennsylvania[2] during the month of February, 1916, there were 24,475 accidents reported, of which 222 were fatal, a percentage of .91. Certainly the incidence of disease and accident is not less among chemical workers in this country than in Germany; indeed, we would expect it to be somewhat greater in view of the lack of racial homogeneity of the workers and the retarded development of protective measures.

In considering the incidence of disease in the personnel of a chemical plant, the fact should be borne in mind that such personnel does not present statistical unity. The personnel consists of two groups; one portion, the true chemical workers, coming in contact with the manufactured products, while a second portion, consisting of representatives of various trades, such as carpenters, bricklayers, machinists, and the like, and a still larger force of ordinary laborers, are very much less exposed to the specific hazards of the industry. This difference in exposure is well illustrated in Leymann's statistics. Thus the average annual loss from illness was 11.8 days for chemical workers, while for the others it was but 8.6 days, a difference of 3.2 days in favor of the latter. Among the various branches of the chemical industry, covered by Leymann's statistics, that of the manufacture of chrome products, with 17.2 sick days annually, yielded the greatest amount of illness, while the manufacture of potassium permanganate and organic chlorine compounds showed the least, 8.8 days.

Again, considering the type of illness, a striking difference between these two groups of workers is manifest. Thus, while 45 percent of the illnesses among chemical workers were internal diseases, only 27 percent of such diseases prevailed among the other workers. On the other hand, external diseases were distributed with some approach to equality among the two groups, the figures for chemical workers being 43 percent, and for the other workers 27 percent. In considering these statistics, we find a special predilection for certain groups of diseases in the following branches of the industry, while they are much less numerous in the remainder. Thus diseases of the respiratory system, according to Leymann, are especially frequent in the manufacture of acids, sulphates, chromates, caustic alkalies, bleaches, and trinitrophenol; diseases of the intestinal tract, while common in all chemical trades, predominate in the manufacture of acids, crude soda, the chromates, analin, sodium sulphid, and in the regeneration of sulphur; burns are especially frequent in

[1]Weyl, "Handbuch der Arbeiterkrankheiten;" Jena, 1908, page 184.
[2]Monthly Bulletin, Pennsylvania Department of Labor and Industry, May, 1916, No. 5, page 4.

acid making, especially nitric acid, also in the manufacture of caustic soda, the chromates, and trinitrophenol; we find skin diseases particularly affecting workers in coal-tar products.

It is evident from the foregoing that our duty to chemical workers lies plainly before us. Studies of health conditions in this industry should be made in this country with a view to minimizing its inherent occupational hazards. It is time for us to awaken to the great social and economic losses due to the neglect of the health conditions in our industries. There are hopeful signs that this apathy and indifference is being removed. Thus a large chemical company has requested the Federal Public Health Service to undertake a survey of its establishments, so that recommendations may be made for the removal or mitigation of occupational hazards. It is earnestly to be hoped that other companies will follow this example by studying the conditions under which their workers are employed, and, by removing unnecessary risks to health, gain thereby not only increased efficiency and economy of production, but do their share toward ameliorating the needless burden of illness and suffering.

CONDUCT A BANK FOR EMPLOYEES

* * *

Union Malleable Iron Company, East Moline, Ill.

DATA FURNISHED BY MR. J. L. SIMMONS, Secretary and General Manager.

We have a well-equipped emergency hospital, which is in charge of competent men. We have a sick benefit fund, employees paying three-fourths and the company one-fourth for its maintenance. The fund costs each employee approximately $4 per year, which covers doctor bills, hospital bills, and operations, and provides $1 per day benefit after the first week's illness.

We also have for the employees a convenient banking system. We request employees to start a saving account with any bank they may designate. We explain that, as it is not convenient for them to go to the bank once a week to make a small deposit, we will place in the bank for them any amount they wish each week, they having the privilege to change the amount as they may desire. The amount is entered up in the book in their own name, the only requirement being that they present the book on the morning of pay day, so that the company can send the book to the bank with the amount they wish deposited. We have found that this is of great benefit to the men, and a large number have taken advantage of this method of saving.

The Prairie du Chien Sanatorium, Prairie du Chien, Wis., has recently opened a new surgical department, with accommodations for 30 patients in single rooms and 2-bed wards. Some of the rooms have private baths. Beds that can be raised to a height of 5 feet or lowered to within 1 foot of the floor are a feature. The construction of the building is along the most sanitary lines, including the elimination of angles where dust would be likely to accumulate. A system of baseboard lighting, which does away with the light from ceiling lamps streaming through the transoms of the patients' rooms at night, has been installed. The walls of the operating room are tinted in gray.

Contract has been awarded by the Presbyterian Sanatorium at Albuquerque, N. M., for the erection of a two-story addition. The first floor of the building will be arranged for a dining room, serving room, and kitchen. The dining room will have a capacity of 110 patients. The second floor will be divided into sleeping rooms.

QUERIES AND ANSWERS

Cost of Building and Maintenance

To the Editor of THE MODERN HOSPITAL:

We are considering the erection of a 50- or 100-bed clinical hospital, and we are informed that you can furnish us reports or an outline of the estimated annual expense of maintenance. If such is the case, we shall be glad to hear from you. A TRUSTEE.

In our hospitals we are demanding more in the way of service now than ever before, and no good hospital can avoid giving service to the sick in step with the demands of modern medicine. This means a laboratory of pathology; a first-class x-ray department; a good dietitian and facilities for her work, because we are substituting special feeding of the sick for the drug therapy of a former day. The net result is that our hospitals are costing more than they used to cost, and we think if we were in your place we would figure on approximately $2,000 per bed for the building, or even a better way would be to figure on about 30 cents per cubic foot of the hospital, taking foundations and roof, porches, sun parlors, etc., into the question; and we would figure on about $2.50 per day per patient for the cost of maintenance, and we would figure on the total capacity of beds in this arrangement.

If you take these figures, you will be entirely safe in approaching the problem of financing your hospital previous to beginning work on it. You will probably be able to cut here and there, and, if actual necessity comes, you will be able to materially reduce some of these estimates, but you will feel far safer and you will have a better hospital, and it will be of far greater service to the sick in your community, if you figure on the estimates we are giving you.

What an Annual Report Should Be

To the Editor of THE MODERN HOSPITAL:

Do you know if there is a standard form of annual report which has been adopted by hospitals? If not, could you recommend the report of any particular hospital, preferably municipal, as a model?

The Public Health Association a few years ago proposed the adoption of a certain form of annual report for city health departments. This is being generally adopted, and furnishes the data that is of interest to other communities. Any information furnished will be greatly appreciated.

A WESTERN MUNICIPAL HOSPITAL.

There is no accredited or standard form of annual report that we know about, and we hesitate to send you a sample of any of the municipal hospital reports that we have, because all have serious faults.

It seems to us that there can be no standard form of annual report for the reason that different hospitals have different purposes to serve in getting out such a report. The general hospitals that are looking for money want to show what they have already done for the money that has been expended in them, and most of these hospitals, in their attempts at such a showing, go too far and include a list of the diseases treated, and pile up tables of figures

that are never read, and that detract from the value of the book to the extent that no attention is paid to it.

It seems to us that municipal hospitals have a somewhat similar purpose to serve, but in a little different way. The best thing in an annual report of a municipal hospital is a short, crisp story by the superintendent of the hospital, who will tell, rather graphically and not in figures, what his hospital has done during the past year, and he should emphasize the necessity for a higher order of service and consequently the appropriation of larger funds by the financial body to which he must look for appropriations. His story ought to have a large element of a "human note" touch to it, and it would not be a bad idea to cite specific cases of poverty, coupled with disease, in which the hospital did a service of which the community ought to be proud. The financial statement of the year, with the number of patients treated, number of days' treatment, the per capita cost, and an explanation of what that cost actually included—of course these things must be a part of the report.

The Minneapolis City Hospital compiles an annual report that is largely statistical, but the superintendent of the hospital prepares, every once in a while, quite a story for the newspapers, and he gets it up in very attractive form, with all sorts of heart throbs and thrills in it, and discusses the human side of the hospital's activities. The local newspapers are glad to publish these stories, and since it has been the custom to get them out the hospital is very much more popular with the public and has very little difficulty in getting what money it needs. Before that it was unpopular, and appropriations were made grudgingly.

Partnership X-Ray Department

To the Editor of THE MODERN HOSPITAL:

We have a well-equipped x-ray department, but our hospital, we think, is too small to permit us to have an all-time salaried director. We have about determined to make some sort of partnership arrangement with one of our doctors who has had experience in x-ray work, but we hardly know just how to get at an equitable division of the earnings of the department. Can you help us out?

A MIDDLE WEST HOSPITAL.

This inquiry was submitted to Mr. A. B. Tipping, superintendent of Touro Infirmary, New Orleans, who, just recently, has been engaged in figuring out the results of such an arrangement. Mr. Tipping replies as follows:

We have a system in this hospital which has worked very equitably, but, as the volume of work performed by our radiologist is probably larger than would be required of your radiologist, you could not make the same exactions as we are in a position to make. Nevertheless, our system may give you a guide for regulating your department. When making the agreement with our radiologist, we stipulated that he should do no x-ray work outside of Touro Infirmary, and that this institution would render all bills, whether to patients in the hospital or to patients sent to our radiologist by other physicians on the outside. Therefore the total income of our radiologist is received from his work in this institution. It was not our desire to make a profit on the department, as the large amount of free work required of the radiologist (for which, of course, he receives no direct compensation) necessitated the holding out of strong inducements for him to remain at this institution. I, therefore, estimated before making our contract with the radiologist, as nearly as possible, the exact expenses for the maintenance of the department, including the purchase of x-ray plates, chemicals, power, and a technician, and, basing this on the aggregate income which the institution and the radiologist separately had previously received, found we could afford to give the radiologist 70 percent of the actual gross receipts up to $800 per month, retaining 30 percent of the $800 for the working expenses of the department, plus interest on the valuation of our equipment and an allowance for depreciation. If in any one month the income exceeds $800, the excess amount is divided equally between the radiologist and the infirmary. We have found this arrangement to work very satisfactorily, and the institution has more than paid the expenses of the department under this system, in spite of the fact that about 70 percent of the work of the department is done free of charge.

With a smaller organization it would probably be necessary for the institution to retain 50 percent of the gross receipts to pay expenses, and I believe that by dividing the receipts in this way, instead of paying a regular salary to a radiologist, you will obtain a more efficient service from him.

The presence of a radiologist in a hospital may be required at any time during the day or night for emergency work, etc., and it is therefore advisable to require the radiologist to come whenever called on to do so in addition to having regular hours daily to be in attendance to do the routine work.

It may be argued that giving the radiologist a certain percentage of the gross receipts might tend toward extravagance on his part with plates, etc., but this is more than counterbalanced by efficiency, for if a doctor feels that for every plate he uses a certain percent of his income will be cut off, it is possible that he will not use as many plates as are actually necessary for the case.

A. B. TIPPING, Superintendent.

Responsibility for the Scientific Work

To the Editor of THE MODERN HOSPITAL:

We are contemplating the appointment of a chief resident physician (salaried)—the term of service and what we intend or would have probably to pay a good man has not been definitely fixed on as yet.

I should like very much to have your view on this subject, and also just what work, particularly of a surgical nature, is allotted by the attending surgeons to the members of the intern staff. Our men here contend that they should be permitted to perform minor and major operations in the fourth month of their one year's service. This request our attending surgeons will not, of course, accede to, and consequently we are confronted with a staff walk-out—that is, all the members of the resident staff have threatened to resign unless this request is acquiesced in.

Could you commend some young man to us who, in your opinion, would be a desirable and successful incumbent of the office of chief resident, and how much do you think we should pay him? This, I understand, you will, no doubt, have to approximate, as you are not aware of the conditions here and the nature and amount of the work.

A PENNSYLVANIA HOSPITAL.

We could not tell just what work a resident surgeon should be called on to perform unless we knew more about the conditions that exist in your hospital. If it is a public hospital, supported by public funds, and it has only indigent sick, then we think the medical staff should determine the capacity of a resident physician or an intern to do surgical work; but if it is a so-called semipublic hospital, supported in part by earnings from pay patients, and you have a staff that supervises and performs the free service, then we think it is all wrong to allow either a resident physician or surgeon, or an intern, to do any surgical work except in the presence of and under the direct supervision of some resident attending surgeon, and it makes no difference whether the man has been in the hospital four

months or two years. You have no more right to allow a beginner to operate independently on your indigent sick than you have to allow him to operate on paying patients, because in this day of modern medicine we are assuming that the poor are entitled to just as good surgical treatment as the rich; besides that, the attending medical staff, including the surgical staff, of a hospital has an obligation resting on it to see that proper surgical work is performed in the hospital, and, whenever the administration of the institution assumes that responsibility by having its own salaried officer take the place of the medical staff, in so far as responsibility is concerned, the hospital is riding for a bad fall. Our idea is to insist on the responsibility residing in the attending medical staff, and, when it does so reside, these men will give you a service far more efficient than if the hospital administration is relieving them of that responsibility.

We make a very clear distinction between administration and medical work; we do not think the medical staff has any business to interfere with your administrative affairs. We would play safe on the scientific side by reposing confidence and placing responsibility in the medical staff for all the medical and surgical work that was done in the institution; then we could hold them to a strict accountability for any bad work that was performed. Medical men throughout the country appreciate the drawing of the line in this way.

If you or your board of trustees appoints a resident medical man, and gives him authority and reposes responsibility in him for the medical and surgical work performed, then you relieve your really responsible attending medical men, which we regard as bad business.

We do not happen to know of a young medical man who would serve your purpose, but we think if we were in your place we would take the matter up with Dr. J. M. Baldy. Dr. Baldy is extremely anxious for the efficient working of the hospitals of your state, and he is trying to coordinate hospital work and medical school work, and we think he would have on his list desirable men for the place you are thinking about filling; besides, it is an excellent thing to keep on the side of and on good terms with Dr. Baldy and your hospital board.

Another Doctor's Patient

To the Editor of THE MODERN HOSPITAL:

The question of ethics between doctors has come up in our hospital, and the administration seems to be in a position where it will have to decide. One of the doctors was called in to assist at an operation, and afterward visited the patient in her room and left orders with the nurse without the consent of the attending surgeon or the patient's family. If this had been the first instance of the kind, it would have been passed over, but this same doctor is making a practice of doing the same thing. What is correct ethics in such a case?

A SOUTHERN HOSPITAL.

There are some pretty well-defined standards of ethics to regulate the conduct of physicians toward the patients of other doctors. Without question, it is wrong and in violation of medical ethics for a physician to visit another physician's patient without an invitation from, or at least the consent of, the attending physician, and it makes no different what the patient himself or the family of the patient does or thinks or wants; and a doctor in a hospital, whether he be a staff member or otherwise, has no business in the room or at the bedside of the patient of another physician, and he has no business to look over the patient's charts, and certainly has no right to give orders to another physician's patient.

But the situation is vastly changed when a physician has been called in to a case with another doctor and has performed a surgical operation, no matter how simple or how minor an operation it was. For example, a doctor attending a case might call in a surgeon to open a very simple abscess, and the surgeon might open the abscess. Then something might go wrong with the patient. For instance, it might be a streptococcus infection, and through the incision made by the surgeon there might be a streptococcic infection that would kill the patient. In such a case the surgeon would be blamed and not the regular attending physician, because, when the surgeon was called in as an expert, he is obliged to assume the responsibility for what is done in a surgical way, and, no matter what the wishes of the attending physician would be in such case, the surgeon has a certain responsibility, and it seems to us he would have a right to insist on knowing what was happening to that patient after the operation was performed; and it appears to us it would be his duty to see that the case was properly dressed and that proper surgical attention was given. If there were an accident in such a case, following even a very minor surgical operation, the surgeon would be charged with malpractice and not the attending physician, and the surgeon would get all of the odium for any indirect happenings in the case, so that you can readily see that the surgeon has not only a certain right to know what is happening to that patient after he has performed his surgical operation, but there is a very grave responsibility resting on the surgeon as well. Of course, the ethical surgeon would do the thing in an ethical way, which is almost unexplainable in writing, but which is thoroughly understood among medical men. It is really the conduct of one gentleman toward another. It is assumed that the attending physician and the surgeon who was called in on the case were friends, or the surgeon would not have been called in by the medical man; if that were the case, then the surgeon would expect the attending physician to invite him to look after the case surgically until the surgical part of the case was ended. If the medical man failed to do that and resented any further presence of the surgeon after the operation was over, then it seems to us the surgeon would refuse to go into consultation with that man again.

It is a vastly different thing when a physician is merely invited to assist at an operation. In that case he has no rights in the case, and has no business to go beyond asking the man who called him about the patient's welfare; that would be mere professional and personal interest.

The Association of Hospital Superintendents of Philadelphia has presented to the city director of public safety a resolution requesting the cooperation of the police department in an effort to eliminate ambulance speeding, and asking that all cases of this nature be reported to the hospitals. The resolution points out that the lives of pedestrians are as valuable as those of the patients in the ambulances, and declares that, if speeding can be stopped in no other way, gongs and bells will be removed from the ambulances and the regular motor horns installed in their places. The ambulance gong should be used only to get precedence in a congestion of traffic, the superintendents say.

Miss Mary Kelly, for the last two years superintendent of the Hoquiam General Hospital, Hoquiam, Wash., has resigned to take an extended rest at her home in Portland, Ore. She will be succeeded at the Hoquiam institution by Miss Isabella Musgrove, who has been assistant superintendent. Miss Musgrove will be assisted by Miss Marjorie Eaton, of the Good Samaritan Hospital in Portland, as head nurse.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Hipwood Pneumatic Crutch

Fig. 1. Hipwood pneumatic crutch.

Crutches, though used for hundreds of years, have really been changed but little in design, and until recently practically the same type of crutch has been standard the world over. As there are many points of improvement in the Hipwood pneumatic crutch, here illustrated, it should be of particular interest, since all hospitals are called on to furnish crutches from time to time. It is claimed by the designer that there can be no discomfort, such as lameness of the shoulders and arms, jolts and jars, pressure paralysis, etc. This feature, as stated, has been overcome by means of a pneumatic support for the horn of the crutch. This support acts, in fact, as a shock absorber, so that, when the weight of the body is thrown on the crutch, there is a pneumatic cushion action, thus breaking the shock to the arm of the patient.

The hand hold is also of unique design, which is so made that it can be adjusted as to height, and, being mounted on a pair of brackets, extends outward from the crutch proper. This permits the patient's arm to be carried in a perfectly natural position, eliminating the cramped wrist often complained of by those who use crutches. The tip is mounted upon a ball-bearing swivel. It is claimed that this entirely does away with the twisting of the head of the crutch in the arm-pit.

This improved crutch has recently been placed on the market, and can be had from the various dealers in hospital supplies.

Sanitary Waste Receptacle

Surgical supply houses are now offering a new waste receptacle under the name of the Hygeia can. As will be seen from the illustration, the Hygeia can consists of a pressed steel frame in which rests the pail or container. The cover is attached or detached from the frame by a simple turn of a thumb-screw. When attached to the frame, the cover opens automatically by pressure on a foot pedal. When the pressure on this pedal is released, the cover closes, sprinkling a powerful yet odorless disinfectant over the contents of the pail, thus arresting decomposition and destroying objectionable odors.

The handle is on the outside, and may be used for carrying the pail only or both pail and frame, and by an ingenious device the handle, when thrown forward, acts as a lock and holds the cover tightly closed. The outfit is made of steel and finished throughout in white enamel.

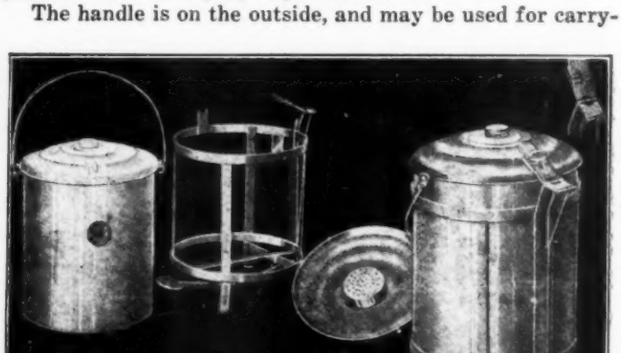


Fig. 1. Hygeia sanitary waste receptacle.

A New Restraint Apparatus

Under the name of the Lawrence Harmony restrainer a new apparatus has recently been put on the market which is here illustrated below, and from these illustrations it will be seen that this is a distinct improvement over the restrainers that have heretofore been in use for the purpose of preventing irresponsible patients from leaving their beds. There is nothing about this new restrainer that suggests a straight jacket, even in a mild way. There are no knots, ties, or loose ends within reach of the patient, and it is impossible for the latter to leave the bed or reach a point of attachment of the fastening arrangement at the foot of the bed, although the patient is free to rise to a sitting position or turn over on either side. The restrainer allows the patient free use of both arms and feet, and does not subject him to the inconvenience or un-

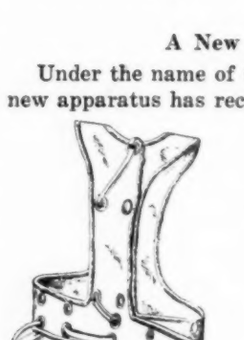


Fig. 1. Lawrence Harmony restrainer.

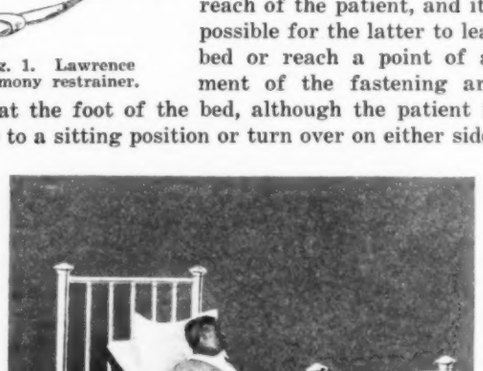


Fig. 2. Restrainer applied, patient in sitting position.

necessary restraint incident to the use of straps as ordinarily applied.

While this is a radical departure from the present-day methods, the inventor claims that he has fully demonstrated the fact that, no matter how powerful the patient may be, there is no possible chance for him to escape from

Fig. 3. Restrainer applied with patient resting on side.

the apparatus, although it restrains without binding the hands or feet.

It is obvious, therefore, that the Lawrence restrainer will be of great value in the treatment of patients suffering from delirium in typhoid, pneumonia, and all temperature diseases where restraint is necessary, because the patient can be sponged and the gowns and bed linen can be changed without removing or even readjusting the apparatus. For patients who are violent and whose arms and feet must be fastened, a simple additional arrangement is provided for that purpose.

Utility Chassis

This device has been designed in order that any ordinary rocking chair may be quickly changed into a comfortable wheel-chair. The two illustrations show quite plainly the construction of the chassis and its application. An adjustable steel frame, rigidly constructed, is mounted on a set of rubber-tired wheels of small diameter. On the front of the frame is a foot-rest, and attached to it an adjustable arm. The purpose of this arm is twofold—it can be used either as a means of drawing the wheel-chair, or can be fastened in a vertical position, and with the tray attached serves as a bedside table, bookholder, etc. The rocker can easily be attached in a few moments. When not in use, the frame can be folded up so that it occupies no more space than an ordinary suitcase.

Fig. 1. Utility chassis.

Fig. 2. Utility chassis attached to ordinary rocking-chair.

Adjustable Artificial Limbs

In a former issue of THE MODERN HOSPITAL we illustrated and described several types of adjustable peg legs which were invented in Germany soon after the European war started. These temporary peg legs are used extensively for the purpose of enabling soldiers who have had the misfortune of losing one or both limbs to leave their beds much sooner than would be the case without such apparatus, and also make room in the base hospitals for the ever-increasing stream of wounded men who have to be taken care of promptly. The use of such temporary artificial limbs also prepares the stumps for the proper artificial limb to be worn permanently later on.

The demand for artificial limbs in all the countries at war has become so great that they are unable to meet the requirements promptly, and we have been informed that extensive orders for limbs have been placed in this country. One can imagine, however, that to make artificial limbs in quantities and in a number of different sizes, and then ship them abroad and try to fit them to the unfortunate cripples, cannot be a very satisfactory procedure, at least not from the point of view of the men who have to wear the artificial members.

To overcome this difficulty of securing a proper fitting limb, a New York artificial limb manufacturing concern has invented a new limb which is adjustable in every direction. Fig. 1 illustrates the leg for amputation below the knee. The open space just above the ankle shows where the upper brace (holding the thigh piece and stump socket) slides on a ratchet with the lower brace (holding the ankle joint and foot). The adjustment is so made that by loosening the four set-screws (two on each side), the leg may be lengthened or shortened as desired. Fig. 2 illustrates the lateral adjustment, which is made of two halves, and at the ends of each of the two bands (upper and lower) are vertical slots, which give the play for the lateral adjustment. A set-screw in each double slot fas-

tens the two ends. This method allows an independent adjustment, which is very important, because one may require a full opening on the top of the socket for the upper part of the stump, whereas the lower part of the stump, having gradually atrophied, may require only a very slight adjustment, if any. As the original shape of the socket is anatomically correct, this adjustment allows a large margin of play, the patient never requiring any artificial

Fig. 1. Adjustable artificial limb for lower amputation.

Fig. 2. Adjustable artificial limp for upper amputation.

means of stuffing, which is always very uncomfortable, and especially almost unbearable in hot weather, besides being unsanitary.

For above the knee amputation the ratchet attachment as shown in Fig. 1 is used just above the knee joint as well as the ankle (Fig. 3). The sockets for the lower as well as the upper amputation are made in two halves, and

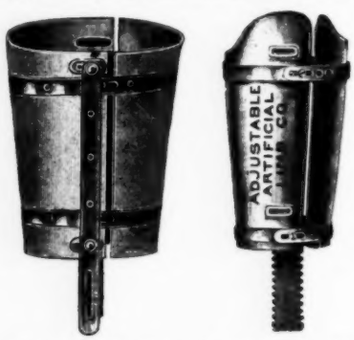


Fig. 3. Sockets for upper and lower amputation, showing lateral adjustment and method of extension.

are so constructed that adjustment can be made both on top as well as on the bottom. Making this adjustment will occasionally throw the socket out of center, but this may easily be rectified by horizontal slots, which enable one to again place the upright steel bars in the center of the socket.

After a careful examination of the new limb by the writer, he would judge that from an assortment of six limbs, three sizes for the right and three sizes for the left side, a dealer of such apparatus would be able to at once fit anyone who may be sent to him by a surgeon. The same ratio as regards sizes would hold good if these limbs were kept on hand in large quantities for the use of crippled soldiers. The advantages of these new adjustable limbs must be especially apparent to surgeons in cases where growing children have to be supplied.

The Rieber Roentgen Converter

The roentgen unit here illustrated has been designed in such a manner that it combines many desirable features in

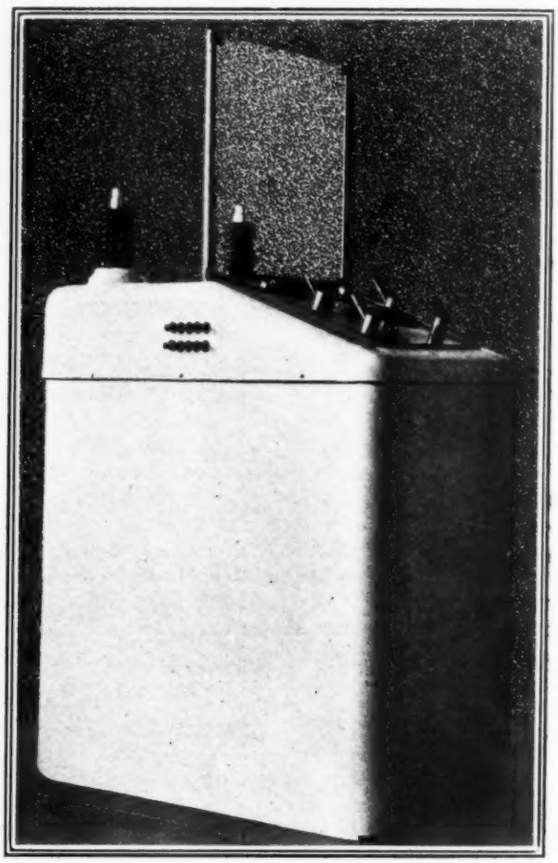


Fig. 1. Rieber roentgen converter.

one machine. The basic feature of the apparatus is the novel system of rectifying the currents delivered to the x-ray tube, thus rendering it positive in action, and extremely quiet running even when heavy currents are delivered. Potentials up to and including 120,000 volts may be obtained. The positive means of controlling this potential, irrespective of the load imposed on the machine by various tubes, has been provided. Additional features are the stabilizing connection for fluoroscopic use and the internal filament control for operating Coolidge tubes without auxiliary apparatus.

The construction of the apparatus differs somewhat from most types of transformers in that the entire high tension system is immersed in oil contained in a steel case. The manufacturers state that this feature assures freedom from insulation failures, which occasionally occur to those who must operate machines in a rather damp climate. There is but one moving part in the rectifying system, and this part is supported on ball bearings which are immersed in oil contained in the casing.

The sum of $30,500 has been subscribed at Pekin, Ill., to build a community hospital.

MINIMUM LABORATORY EQUIPMENT

List of Needed Things Made by Chairman of New Jersey State Society Committee

There is always considerable discussion as to the minimum equipment of pathological laboratories. In many institutions laboratory supplies have been purchased regardless of cost through laboratory routine, and in many instances the orders have been given by semi-laboratory technicians whose general outlook was narrow through inexperience, or possibly biased by their interest along special lines. In many instances expensive apparatus has been purchased, while some practical appliance would have served the purpose, and to much better advantage.

Dr. J. C. McCoy, chairman of the committee on scientific work of the New Jersey Medical Society, has outlined the minimum requirements for a standard laboratory necessary to care for the general routine work conducted by the average hospital. Dr. McCoy presents the following tentative equipment:

EQUIPMENT FOR PATHOLOGICAL DEPARTMENT

1 microscope equipped with a 1/3, 1/5, 1/12 oiled immersion and Abbe condenser.
2 eye pieces.
1 triple nose piece.
1 mechanical stage. A dark stage with a suitable light for same is also desired.
1 microtome, either paraffine or cellodin. A freezing attachment for the same, or a freezing microtome as a separate instrument for rapid section work, is desired.
1 incubator, either gas or electrically operated, of sufficient size to accommodate the bacteriological and serological work of the laboratory.
1 sterilizer of the Arnold type.
1 autoclave of sufficient size to meet the needs of the bacteriological and serological divisions.
4 animal cages for the housing of laboratory animals.
1 pair balances with one set of metric weights.
1 hemoglobinometer.
1 Thoma-Zeiss counting chamber.
2 white cell blood pipettes.
2 red cell blood pipettes.
1 iron burdette stand.
2 iron tripods.
6 squares of iron wire gauze.
3 Bunsen burners.
1 centrifuge (electric preferred), with graduated and plain centrifuge tubes, and Babcock attachment for milk analysis (fat determination) is also desired.
1 iron support with three rings.
1 Stokes water still.
1 filter pump.
1 spatula.
3 wire baskets for test tubes.
1 set of cork borers.

GLASSWARE

4 gross slides.
3 ounces cover glass.
2 dozen staining dishes.
1 pound assorted glass tubing.
1 pound assorted glass rods.
6 nests beakers.
3 nests evaporating dishes.
2 gross test tubes 4x½ inches.
2 gross test tubes 6x¾ inches.
½ gross glass-stoppered tincture bottles (assorted sizes).
2 dozen glass-stoppered salt mouth bottles (assorted sizes).
½ dozen funnels (glass), assorted sizes.
1 dozen 1,000 c.c. Erlenmeyer flasks.
2 dozen 500 c.c. Erlenmeyer flasks.
2 dozen 250 c.c. Erlenmeyer flasks.
1 dozen 120 c.c. Erlenmeyer flasks.
2 10 c.c. graduated cylinders, graduated in 10th c.c.
2 25 c.c. graduated cylinders, graduated in 10th c.c.
2 50 c.c. graduated cylinders, graduated in 10th c.c.
2 100 c.c. graduated cylinders, graduated in 10th c.c.
2 200 c.c. graduated cylinders, graduated in 10th c.c.
2 500 c.c. graduated cylinders, graduated in 10th c.c.
2 20 c.c. pipettes, graduated in 10th c.c.
4 10 c.c. pipettes, graduated in 10th c.c.
6 5 c.c. pipettes, graduated in 10th c.c.
2 dozen 1 c.c. pipettes, graduated in 10th c.c.
1 dozen 1 c.c. pipettes, graduated in 1/100 c.c.
2 50 c.c. burettes, graduated in tenths.
1 package lens paper.
12 slide boxes or one slide cabinet.
1 dozen test tube brushes.
1 chemical thermometer, 200 c.
1 Doremus ureometer.
1 Esbach albuminometer.
1 urinometer.
1 bell (glass) for microscope.
1 balsam bottle.
2 dozen Petri dishes, 100x10 mm.
2 dozen fermentation tubes.
2 Coplin staining jars.
1 wash bottle.
1 package labels for slides.
1 package labels for bottles.
Filter paper.
2 tube racks.
1 card index for permanent filing of pathological reports, to be cross-indexed.
1 copper water bath for test tubes, also fitted with rings.
Approximate cost of this equipment probably within $600.

BEDSORES IN THE HOSPITAL

A Patient's Experience for Six Years on the Flat of His Back

Much has been written on the question of bedsores, but, so far as I have read, it has always been from the pen of a doctor or nurse, and possibly the viewpoint of a patient may be of some interest to the readers of THE MODERN HOSPITAL. I shall attempt nothing exhaustive, but shall merely record a few points gathered during the six years spent in three well-known and excellent institutions in the United States and Canada.

The conditions under which I was laid up were trying, and, save in the case of a paralytic, could hardly have been more conducive to bedsores. During two hot summers I was encased in plaster from below the knee to the beginning of the ribs. When this was off, I was in extensions, with hips so acutely painful that I was unable to turn on my side in the slightest degree. On two occasions I lay for seven weeks strapped on an iron and leather frame, where the lower part of the back could be reached only with difficulty. When I say that during all this period of confinement to bed I had only one semblance of a sore (and that one which I was powerless to prevent), it will be seen that we were well repaid for adhering to certain principles established at the outset, and others added as the result of experience.

The bedsore in question came after an operation on the hip. To prevent infection, the whole area about the hip was practically sealed with a rubber preparation. Unfortunately, the coccyx was included, so that in the few days following the operation the pressure upon this point and the presence of blood, which the rubber held from escape, combined with the body heat to create an ideal condition for the development of a sore. The skin will rarely fail to respond negatively to such conditions. But, apart from this experience, I spent five out of nearly seven years on the flat of my back without a sore of any kind, and at the end of that period was stronger and healthier than when I first went to bed.

How did it so happen? My father was a doctor, and to certain definite principles he established in my mind I attribute the later success when he was not there to guide. He always impressed on me the necessity of adhering to a rule only insofar as common sense and pre-

Mr. E. Lapthorn Smith and his business partner in their "office" at Mercy Hospital, Chicago. These two young men, physically incapacitated, concluded to go into business, using their jointly occupied hospital room for an office. They were quite successful as literary agents and authors.

vailing conditions were in accord. This brings to mind the case of a nurse who had been taught in her training days to mix a certain preparation upon a marble slab. When, out on a case a year later it was necessary to prepare the same mixture, she telephoned innocently to the doctor who had instructed her, to inquire where such slabs could be obtained. Amusing, but also illustrative of the application of instruction without the cooperation of brain cell.

A patient is lying flat on his back in midsummer, literally bathing in a pool of his own perspiration. It is one of those cases where any lifting or turning movement is both painful and undesirable. The nurse laboriously changes the wet sheet and proceeds to bathe the back with alcohol. Temperance alcohol, as a rule! Half an hour after this attention the patient's back is again wet and uncomfortable. In the first place, the diluted alcohol neither dried nor antisepticized the pressure areas, and, secondly, even if it had, that overestimated article, the rubber sheet, would have held back enough perspiration to again dampen both the sheet and the patient's back; and the nurse's effort would have been in vain. Yet in the majority of institutions they never think of removing the rubber sheet in such weather and under such conditions, and replacing it with absorbent material that will keep the patient's back free from any collection of moisture. Any danger of damage to the mattress can be met by local means, or by the use of a rubber strip, as the occasion demands.

An institution is not altogether to be criticised because economic necessity forces it to greatly dilute the alcohol used for bathing purposes, but why use a watery alcohol when common sense tells us that a powder with a generous proportion of boric acid will be infinitely more satisfactory and efficacious in dealing with the skin in hot weather. In my own case we kept the skin in good condition all through the long, hot summers, even though encased in a cast, by blowing in powder daily with an insect blower.

Turning now to the question of pressure, in the region of the base of the spine there is little to record by way of suggestion in this section. As far as I have observed, most hospitals keep a pillow under the small of the patient's back, and so relieve to a great extent the pressure on the bony prominences of the spine and pelvis. A very effective alternative, however, may be found by placing this pillow just below instead of above the hips. Pressure is often better reduced in this way, and, in addition, it will keep the patient from continually sliding down in the bed.

The heel, unfortunately, is a neglected member as far as I have observed; not neglected, it is true, once it is red and inflamed. The nurse makes a ring for each heel, and after four or five days the stinging, burning feeling passes away. But why any of that discomfort? A small pillow under each ankle (not under the heel, as I have often seen), or an ordinary pillow under the calves, renders a sore heel a virtual impossibility, and the nurse is relieved of all anxiety from that source.

These words are written with no thought of revolutionizing hospital treatment, but are the mere observations of an invalid of seven years' experience —six in hospitals and five on the flat of my back.

E. LAPTHORN SMITH,
Bank of British North America, North Battleford, Saskatchewan, Canada.

THE "BIG BROTHER" MOVEMENT

An Agency That Has Had Much to Do With the Guidance of Boys—Some of Its Principles and Policies

When Mr. Ernest K. Coulter addressed the members of the Men's Club of the Central Presbyterian Church in 1904, probably no one had any conception that the suggestion which he made at that time would grow to the huge proportions that it has now attained. His "Big Brother" idea was that each one of the forty men present should become the friend and adviser of one unfortunate little boy. Until that time the only help accorded to children who had shown a wayward tendency was to take them from their parents and send them to an institution. Formerly the machinery of the law had but one function—to punish—and for thousands of years we have answered "yes" to that world-old query, "Am I my brother's keeper?" The keeping, however, had been intrusted to those in charge of jails, prisons, reformatories, and asylums. Now we were to realize that the keeping could not be deputized—that we are our brother's keeper, personally and individually.

The idea of probation was being tried and proving successful. Probation officers, however, could not give as long supervision as was sometimes necessary. They were also handicapped in being unable to see their probationers as often as they might wish. Therefore, this auxiliary force was welcomed by the children's court and by the probation officers, and has been made welcome ever since.

There was never any intention to supplant the work of the salaried officers, but rather to assist in carrying out the reformation indicated as necessary by the court and by the probation officer. The Big Brothers, then, were to start in a very small, cautious manner, trying out the scheme, which was big in its possibilities. The early struggles of those forty men were discouraging. It was diffi-

cult to establish confidence in the minds of parents and in the hearts of children. To the persistence of those men is due in no small measure the present success of the work.

In 1911 the Benevolent and Protective Order of Elks gave the idea its official sanction, and was the first fraternal organization to take it up as part of their work. The Big Sisters were organized in 1912 under the leadership of Mrs. William K. Vanderbilt, and still continue to render efficient aid to unfortunate girls. In more than one hundred cities throughout the United States about 15,000 men are doing some form of Big Brother work, ranging from gifts of Christmas baskets to the more intensive work of New York, St. Louis, Philadelphia, Chicago, Newark, and Dayton. These men are all by instinct, and many of them by experience and training, well adapted for this work. All are urged to study more thoroughly boy life as found in the various boys' clubs, gymnasiums, and settlement centers of the city. For the purpose of this study, the office keeps on hand a list of the various activities, which serves also our convenience in suggesting suitable recreation for the boys, and also lists of books and magazine articles dealing with boys. Theories are made up of an infinite number of details. By coming so directly into touch with what might be called the little things of a little boy's life, we are better able to form theories more comprehensive than would be possible otherwise.

It is difficult to adhere to the original idea to which the organization is pledged, which is to discover the needs of unfortunate boys, to bring them in touch with good influences, and to make that contact permanent. Viewing, as we do, the many needs and the infinite opportunities, it is a very great temptation to interpose ourselves in the work that belongs to others. There are many worthy causes which would serve to distract from that single purpose, but, on analysis, many of these are found to properly belong to the work of organizations which already exist.

Originally the entire number of boys added to our list were discovered in the Manhattan Children's Court, probably because of Mr. Coulter's official connection. With greater publicity have come greater opportunities in knowing the needs of boys through the Board of Health, Bureau of Attendance of the Board of Education, Prison Association, Children's Aid Society, Society for the Prevention of Cruelty to Children, the social service bureaus of various churches and hospitals, orphan asylums, New York Juvenile Asylum, House of Refuge, Charity Organization Society, Association for Improving the Condition of the Poor, parents, boys themselves, and business firms. Probably 99 percent of these are the children of very poor parents.

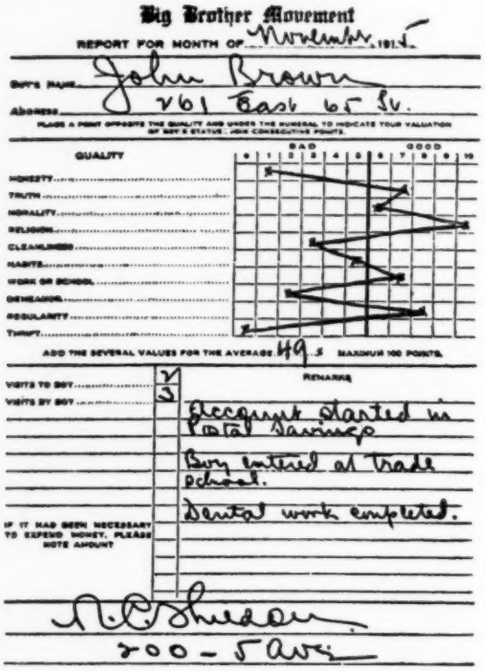
A great number of boys are subnormal mentally, morally, and physically. It is regrettable that our public school system has not yet fully adapted itself to the needs of a class that ten or twelve years ago was not forced to acquire an education. These children are now compelled to conform to a curriculum that was formulated without them in mind. The "thing-minded" child is not receiving his just due, for he is condemned to hours of idleness in ungraded classes, where his mind and will deteriorate. Tainted heredity, bad neighborhood, poverty, and ill health play no small part in the causes of juvenile delinquency. It would seem almost impossible to change a boy's environment, but this has been done in many cases by making a change in the parents' employment or by a rearrangement of domestic conditions. Parents themselves are very largely at fault for the misconduct of their children. Notably is this true in the case of intemperate, lazy fathers or mothers. Comparatively few parents realize the subtle changes of adolescence. The child, often nurtured on a diet of fear, attaining the age of reason and judgment, demands different treatment. The parents cannot, or will not, adjust themselves to the new condition; misunderstandings, quarrels follow, and the boy is "incorrigible." Experience forces us to conclude that it is wellnigh hopeless to attempt the reformation by Big Brother influence of a wayward boy who is mentally over sixteen years of age; so too, it is necessary to realize that failure must be the end of our attempts to assist mentally or morally defective boys. Authorities are by no means agreed in regard to mental defectiveness, and we feel that there can be found no better object for study and experiment than this problem. It is not sufficient to test, measure, and label defective children; yet very little else is done for them at present. It is properly a problem for institutional or laboratorial study. It is more than probable that, were the necessary funds forthcoming, pathological treatment could be given which would aid thousands of cases now deemed helpless. It is pitiful to realize that we are impotent, and that we must see hundreds annually added to the already huge army of incompetents. We can only hope that some one will make it possible for physicians to have an opportunity to study and to treat all grades of mental and moral defectiveness from the imbecile up to and including the moron. About 90 percent of all boys are, however, amenable to good influences, and very nearly that same percentage meets with success. The big gain has been, of course, in the redemption of the boy, but the monetary saving to the city and state is of no little consideration.

The first step in our method is, of course, gathering of data, which we have found to be best accomplished by a salaried worker. In this way essentials are found and irrelevant matter is discarded, uniformity is maintained, and false information is eliminated. Not only are the statements of boys and parents taken, but often the case history of the Association for Improving the Condition of the Poor, Charity Organization Society, Children's Court, etc., are found to have important bearing. The boy's parents are visited, the objects and aspirations of the Big Brother explained, and the promise of cooperation secured. A Big Brother is then chosen according to geographical proximity, religious sect, and personal characteristics; an appointment is made and a physical introduction follows, either at the Big Brother's office or home. The new-found friend is then in a position to visit the boy's home, make the acquaintance of the parents, and to plan the work to be done. In the meantime the Big Brother has received from this office a transcript of the data gathered and a number of suggestions. The first report from the Big Brother is due two weeks after assignment, and bears especially on the boy's physical and mental equipment and environment. The Big Brother is then advised regarding dental, medical, and psychological clinics, trade schools, gymnasiums, boys' clubs, and Boy Scouts, employment, libraries, savings funds, summer camps, etc.

Financial help to the boy is a matter that receives the most serious consideration of the Pig Brothers. Perhaps nowhere else in the world will be found boys more thoroughly schooled in graft. We are forced to realize that we help to pauperize a boy when we supply money or clothing without giving the lad a chance to gain his self-respect by paying for what he receives, either in money or labor.

For several years we have had the privilege of nominating boys to spend two weeks of real vacation at six camps. Probably no other poor boys have the opportunity to have a thoroughly good vacation and at the same time to unconsciously imbibe so much benefit physically, morally, and mentally. The trials of the camp managers, though experienced men, are unusual. Heterogeneous groups of boys, ranging in age from 10 to 16 years, whose only lessons in discipline have been received in the overcrowded public schools, do not provide the best material for organized effort. Add to this consideration the fact that a large proportion have already exhibited a wayward tendency, and one is able to picture the problem. As a result of the contemplation we are forced to admire the patience and kindly firmness that marks the administration of all the camps.

Monthly reports are required from the Big Brothers on the following form:


Big Brother Movement

REPORT FOR MONTH OF November, 1914

Boy's Name John Brown

Address 761 East 65 St.

PLACE A PRINT OPPOSITE THE QUALITY AND UNDER THE NUMERAL TO INDICATE YOUR VALUATION OF BOY'S STATUS FOR CONSECUTIVE PRINTS.

QUALITY — BAD 0 1 2 3 4 5 6 7 8 9 10 GOOD

HONESTY
TRUTH
MORALITY
RELIGION
CLEANLINESS
HABITS
WORK OR SCHOOL
DEMEANOR
REGULARITY
THRIFT

ADD THE SEVERAL VALUES FOR THE AVERAGE 49.5 MAXIMUM 100 POINTS.

VISITS TO BOY
VISITS BY BOY

REMARKS

Account started in Postal Savings

Boy entered at Trade school.

Dental work completed.

IF IT HAD BEEN NECESSARY TO EXPEND MONEY, PLEASE NOTE AMOUNT

N. C. Sheldon

700 - 5 Ave.

Blank for monthly reports.

It has been said that it is next to impossible to get volunteer workers to do satisfactory continuous work, but we find little difficulty in getting every man to report regularly.

An average based on reports on 100 boys chosen at random for four months shows:

	Percent		Percent
Honesty	76	Habits	73
Truth	75	Work or school	74
Morality	77	Demeanor	78
Religion	67	Regularity	74
Cleanliness	70	Thrift	72

A general average of 73.6 percent—surely not a bad showing for any boy.

The office follows up an assignment for one year, but the Big Brother follows up his boy much longer. Some boys who formed the original "little brothers" are still enjoying the friendship and guidance of their older friend; and some boys have so improved as to have graduated into the ranks of the Big Brothers.

To be a Big Brother needs no organization, of course; but we feel that an infinite amount of good has been accomplished during the past ten years in discovering the need, bringing the good influences to bear, through the mediation of the Big Brother, and in directing and encouraging the individual worker.

It is undoubtedly true that, in the relation of leader and disciple, the Big Brother gains the greater benefit. We, at the center of the little circle of activity, feel the greatest benefit on heart and mind, and render to God profound thanks for our privilege.

ROWLAND C. SHELDON.
General Secretary Big Brother Movement, New York City.

HOSPITALS AND THE CONTROL OF CANCER

American Society Plans Nation-Wide Campaign in Hospitals to Secure Data for Systematic Study

The American Society for the Control of Cancer confidently seeks the interest and direct assistance of hospital administrators in carrying on the work for which it was organized—namely, "to disseminate knowledge concerning the symptoms, diagnosis, treatment, and prevention of cancer, and to collect statistics in regard thereto." The purpose thus announced when the society was founded on May 22, 1913, is interpreted to include (1) a nation-wide campaign of public education regarding the need of the early recognition and treatment of malignant disease, and (2) the systematic promotion of statistical research in this field. Progress toward both of these objectives will depend, to a large degree, on the cooperation given by general and special hospitals, and their appropriate clinics, dispensaries, record departments, and nurses' training schools. On the other hand, the work of the society, being essentially educational and preventive, in no way touches the primary function of the hospital in the care and treatment of individual patients.

Few organizations devoted to health propaganda have been established in closer alliance with the leading professional associations and individual practitioners. The Society was founded as the direct result of the recommendations of a committee of the American Gynecological Society, heartily seconded by the great majority of other special medical associations of national scope which met with the Congress of American Physicians and Surgeons at Washington in 1913. Subsequently the American Medical Association, the Clinical Congress of Surgeons, the Western and Southern Surgical Associations, and many state and local societies have indorsed the movement, and, what is more important, have gladly identified their own cancer committees with the national and local governing boards of the American Society for the Control of Cancer.

The basic principle of this campaign is to attack this great and increasing scourge of the race by bringing to wider practical application our present extensive knowledge of cancer. It is too often and too thoughtlessly said that nothing is known about the disease. On the contrary, while much is still to be learned about the ultimate nature of the malignant process, there exists a great body of accumulated facts which are familiar to practitioners of the progressive type, but which, in their practical significance, have by no means filtered through to the general public. The leaders in this movement believe earnestly that it is necessary for the people to know the elementary facts and established conclusions about this threatening disease. They believe that only by turning on the light of human reason and acquainting the public with the danger signs of cancer, often so painless and insidious in its approach, only by telling the patient in concrete figures how much greater is the chance of cure in the early stages, only by these methods, so successful in the war on tuberculosis,

can we hope to make definite headway against cancer pending the acquisition, through patient laboratory and clinical research, or a more satisfactory insight into the primary cause and rational treatment of malignant disease.

Now, the hospitals are the great repositories of the facts which are to be collated, digested, and forged into convincing messages of hope to the public. In their operative clinics, radium and x-ray departments, and in their volumes of case histories, are rich mines of data which have never been adequately studied. In the first place, this material ought to be dug up and utilized in the scientific investigation of the cancer problem to a far greater extent than has yet been done. In the second place, many prominent students believe that, if fair statements of the results secured by modern methods in the treatment of malignant growths could be given wide circulation among the public, they would go far toward changing the exaggerated and disastrous attitude of pessimism and ignorance about cancer which now so widely prevails. It is, therefore, the function of the society to collect and study this material and present it to the public through lectures, circulars, newspaper articles, etc., seeking in this effort the assistance of boards of health, women's clubs, nurses, social service workers, and all other appropriate educational forces, both national and local.

In pursuing its policy of statistical investigations, the society feels that it is filling a gap which would otherwise exist between studies of the official mortality records on the one hand and the results of experimental and clinical research on the other hand. The importance of the statistical approach to this problem is now always fully recognized. Many competent authorities believe that a comprehensive study of the factors of heredity, race, sex, age, and other conditions under which malignant tumors develop in the different organs and parts of the human mechanism, will throw an increasingly clear light on the etiology of the many forms of cancer. The relation of the hospital to such investigations is, of course, determined by the fact that cancer, perhaps more than any other disease of like prevalence and importance, is treated in the great majority of cases in institutions. It is one of the chief aims of the society, therefore, to promote such uniformity and standardization of hospital records as will enable the reports of all the leading institutions to be compared and their statistics massed for analysis, thus leading to sound conclusions based on great numbers of cases. To this end the society wishes to cooperate with movements for the standardization of histories and records as represented by the committees of the Clinical Congress of Surgeons and of the American Hospital Association.

In order to develop its statistical studies under the best technical surveillance, the society has appointed a statistical advisory board, consisting of some thirty prominent representatives of hospitals, research laboratories, insurance companies, and public health departments. A special committee has devised and is now putting into use a blank for the reporting and study of surgical treatment of cancer. This schedule has been purposely restricted to the fewest possible questions in order to induce large numbers of representative American surgeons to cooperate by filing reports of all their cases, both in hospital and private practice. It is possible for competent hospital clerks to fill out these blanks from the original records of the surgical services, and it is hoped that many of the larger hospitals may be willing to lend their direct assistance in this manner to this plan, which promises eventual results of great interest. The blank provides for follow-up inquiry from the central office of the society at least once a year on each case recorded. The society hopes, therefore, for the establishment of adequate general follow-up work in every large hospital, which, through the agency of social service departments or other accepted methods, would insure keeping track of the after-history of cancer as well as other patients.

A second special committee has carried into effect the recommendation of the statistical advisory board that a study of the experience of the principal insurance companies be made with respect to the mortality from two selected forms of the disease. An elaborate blank has been prepared, and sent in the necessary quantities to all these companies, in order to obtain a wide range of detailed information regarding each death from cancer of the breast and cancer of the buccal cavity.

Still another set of blanks has been prepared for experimental use in one of the best equipped special cancer hospitals. These forms give opportunity for taking an original and record history of each case in such detail as regards all possible conditions bearing on the etiology of the disease that, if the use of the form could be made general, an enormous amount of information of the highest scientific value would undoubtedly result.

One of the first endeavors of the society was to promote the improvement of the national mortality statistics of cancer in order that it might become possible in this country to follow the example of the foremost English students in drawing important conclusions from the exceptionally detailed reports of the registrar-general of England and Wales. Prompt cooperation was forthcoming from the United States Census Bureau, and at the suggestion of the society a special report on the cancer mortality of the United States registration area in 1914 is now in press. This promises to be, perhaps, the most notable statistical report on this disease ever made by any government. For the first time the figures of deaths from cancer will be separated according to whether the diagnosis was based on clinical observation alone or was confirmed by autopsy, surgical intervention, or microscopical examination. The value of the report will be further enhanced by the separate statement of deaths according to twenty-nine different organs and parts affected, and with greater detail as to age, race, and sex than is possible in the regular annual mortality reports of the Census Bureau.

A word should be said about the opportunity of hospitals to cooperate in the direct educational work of the society. There is especial need for the adequate instruction of nurses regarding the early symptoms of cancer. Hospital training and experience gives the nurse only too great a chance to become familiar with cancer in its later and more depressing stages. The nurse seldom sees early cases in routine work; therefore hospitals should provide some special teaching of the early symptoms and danger signs, and of the duty of the nurses to urge immediate consultation with the family physician or surgeon, while avoiding any opinion or diagnosis of her own. It should be remembered that many patients, especially women, will ask a nurse about suspicious or unusual conditions when they would not think of calling a doctor about such apparently trivial matters. Every school of nursing has been asked to arrange appropriate instruction on this subject, and the society welcomes every chance to provide qualified speakers for nurses' meetings and special articles for their professional publications.

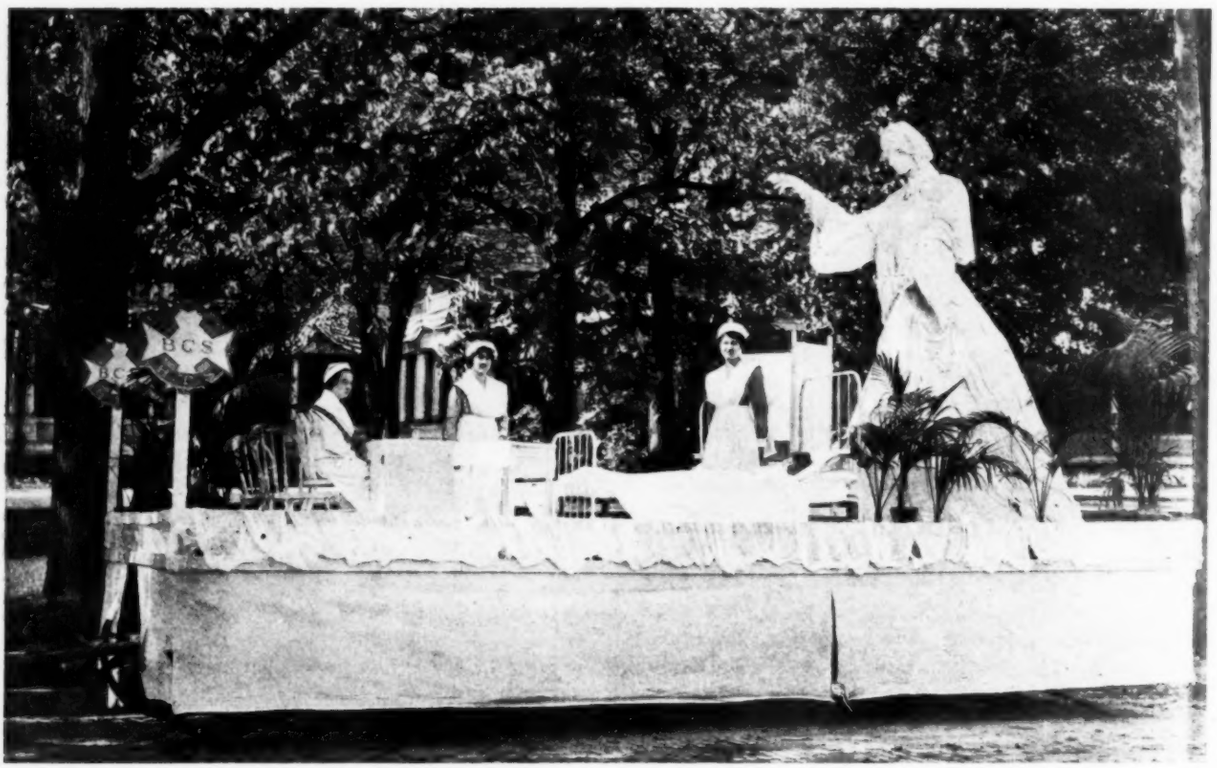
Hospitals can further assist by permitting and encouraging the display of wall charts and exhibits, and by the distribution of proper circulars in the appropriate dispensary services. It may be argued that in the assembling of

patients keenly interested in their bodily condition, and while they are waiting their turn for treatment, there is an exceptionally favorable opportunity to impress them in this manner with the general lessons of hygiene and, so far as may be possible, with the danger, the means of prevention, and the hope of cure of this ancient and dreaded enemy of the human race—cancer.

CURTIS E. LAKEMAN.

Float of the Battle Creek Anniversary Pageant

At the golden jubilee celebration of the Battle Creek Sanitarium, held on October 3, 4, and 5, the training school for nurses took a leading part. In the exhibition hall it had a model sick room and a booth. In this latter were displayed pictures of many classes. Since its opening in 1883 the school has graduated over 1,300 persons, men and women. Several hundred nurses marched in the night pageant, led by a float which contained a statue of Florence Nightingale 11 feet tall, made of staff. At both performances of the morality masque, "The Triumph of Truth," the nurses appeared in a body, and on the closing night they presented to Mrs. Mary S. Foy, superintendent of the school, a wrist watch.



Nurses' float, with 11-foot statue of Florence Nightingale, in the pageant of the golden jubilee celebration of the Battle Creek Sanitarium.

Miss Mary Trigg, superintendent of the Greenville Sanatorium, Greenville, Miss., was elected president of the Mississippi State Nurses' Association, which closed its annual convention at Natchez November 1. Other officers named were Miss Esther Mitchell, superintendent of the Vicksburg Infirmary, and Miss Jennie M. Quinn, superintendent of the Hattiesburg Hospital.

Additions recently made to the San Joaquin Hospital, Bakersfield, Cal., have increased the capacity of the institution one-third. Considerable new equipment, including an x-ray machine and a giant magnet, has been installed.

Louis R. Curtis, Formerly of St. Luke's Hospital, Chicago, Makes a Change

Considerable interest has been aroused in medical circles by the announcement of the election of Mr. Louis R. Curtis, for eighteen years superintendent and secretary of St. Luke's Hospital, Chicago, as president of the F. S. Betz Company. It is stated that Mr. Frank S. Betz, the retiring president, continues with the company as chairman of the board of directors.

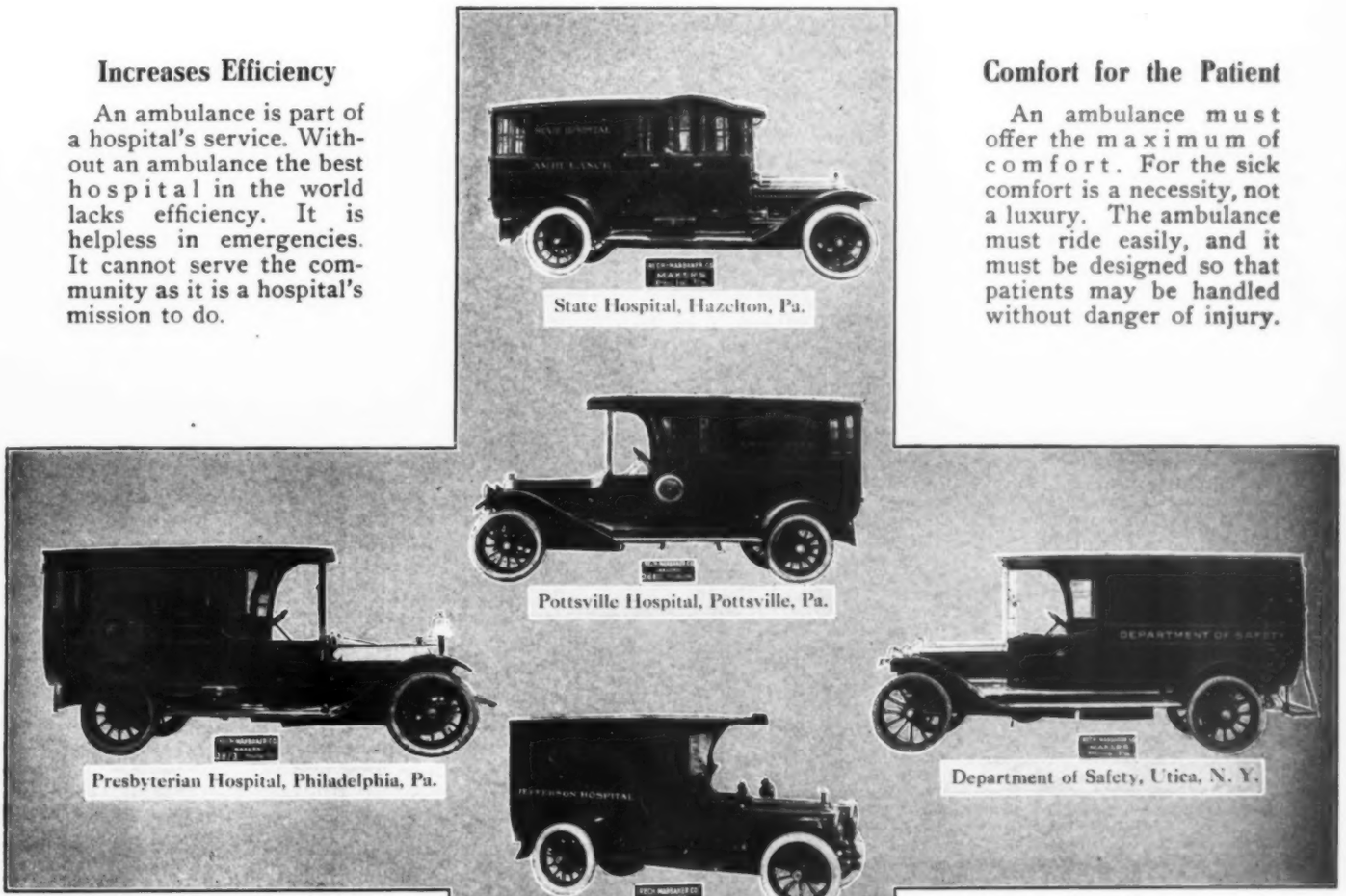
Mr. Curtis was born in 1865 in Philadelphia. He obtained his college training at Stevens, graduating as mechanical engineer. In 1889 he entered the hospital field as assistant superintendent of the New York Hospital. During that period he attended medical college, not with an idea of practicing, but to better fit himself for his hospital work. From the New York Hospital Mr. Curtis went to the General Hospital of Elizabeth, N. J., staying there for about one and one-half years. From there he came to St. Luke's Hospital, Chicago, as superintendent, and has been the dominating figure in that institution, both as superintendent and secretary, until recently, and is now vice-president in charge of the operation of the institution. During the last years Mr. Curtis has also been prominent as a consulting engineer, especially among hospitals, and has introduced many advanced and successful ideas in hospital construction and organization. His wide experience among hospitals and medical men, coupled with his technical training, makes him peculiarly well fitted for his new position.

Construction work on the Ivinson Memorial Hospital at Laramie, Wyo., is nearing completion. The building is a three-story and basement fireproof structure, with a capacity of 35 beds. It is being erected by Edward Ivinson, former president of the First National Bank of Laramie, as a memorial to his late wife.

Ambulance Service

Increases Efficiency

An ambulance is part of a hospital's service. Without an ambulance the best hospital in the world lacks efficiency. It is helpless in emergencies. It cannot serve the community as it is a hospital's mission to do.



State Hospital, Hazelton, Pa.

Pottsville Hospital, Pottsville, Pa.

Presbyterian Hospital, Philadelphia, Pa.

Department of Safety, Utica, N. Y.

Jefferson Hospital, Philadelphia, Pa.

German Hospital, Philadelphia, Pa.

Comfort for the Patient

An ambulance must offer the maximum of comfort. For the sick comfort is a necessity, not a luxury. The ambulance must ride easily, and it must be designed so that patients may be handled without danger of injury.

First Aid Conveniences

The ambulance must also be designed with the attendant in mind. Every article of first aid in fracture, wound, or suffocation should be convenient to his hand. Lighting and ventilation, working space, hot and cold water, are also subjects of careful planning.

Concerning Ourselves

We have made ambulances for years—both horse-drawn and motor—and in our ambulances are embodied the ideas of both hospital experts and mechanics. We have made hundreds of special ambulances and can meet any demands made upon us.

SEND FOR OUR COMPLETE CATALOGUE

RECH-MARBAKER COMPANY

Girard Avenue and Eighth Street, Philadelphia, Pa.

The MODERN HOSPITAL

Published the First of Every Month by

THE MODERN HOSPITAL PUBLISHING CO., Inc.,
OTHO F. BALL, President.

METROPOLITAN BUILDING, ST. LOUIS, MO.
Telephones—Bell, Lindell 5400; Kinloch, Delmar 3154.

BRANCH BUSINESS OFFICES.

CHICAGO—6 N. Michigan Avenue.....C. S. MOTT, Mgr.
NEW YORK—1 Madison Avenue.....HERBERT K. CARTER, Mgr.

FOREIGN REPRESENTATIVES.

GREAT BRITAIN.....SCIENCE REVIEWS, Ltd.
36-38 Whitefriars Street, Fleet Street, London, E. C.
GERMANY AND AUSTRIA.....GUSTAV FOCK
7-9 Schlossgasse, Leipzig, Germany.
AUSTRALASIA.....STERLING & CO.
Modern Chambers, 317 Collins Street, Melbourne.

SUBSCRIPTION.

Under domestic postage, $3.00; foreign postage, $3.50 (14 shillings). Single copies 35 cents.

Domestic rates include United States, Cuba, Mexico, Porto Rico, Canal Zone, Hawaii and Philippines.

INDUSTRIAL WELFARE NUMBER.—Extra copies of the Industrial Welfare Number (issue of August, 1916) to subscribers, 50 cents; to others, $1.00.

SUBSCRIPTIONS.—Subscriptions may begin at any time. Volumes begin January and July, except in the case of Volume I, which consists of the numbers issued during 1913 (September to December, inclusive).

REMITTANCES.—Remittances for subscriptions should be made by check, draft, post office or express money order, or registered letter. Make all checks and money orders payable to "The Modern Hospital Publishing Company."

CHANGE OF ADDRESS.—Notice of change of subscriber's address should give both old and new address. Notice should reach us fifteen days in advance of date of publication.

COMMUNICATIONS.—When communications relate to more than one subject (manuscript, reprints, subscriptions, news items, etc.), correspondents will confer a favor by writing on a separate sheet for each subject, thereby insuring more prompt attention.

ADVERTISEMENTS.—The advertising pages of THE MODERN HOSPITAL are available for announcements of anything of interest and service to those engaged in the erection, equipment, administration, and in the medical, surgical, and nursing services of hospitals, sanatoriums, and allied institutions. Advertisements of secret remedies and other objectionable announcements will not be accepted. The supervision of the Editors is extended to the advertising columns, in which only approved products and reliable manufacturers will be represented.

CLOSING OF FORMS.—Advertising forms close on the 10th for the issue of the following month. Ample time should be allowed for composition of advertisements and the sending and return of proofs.

ADVERTISING RATES.—Advertising rates will be sent on request.

CONTRIBUTIONS.—Original articles on any problems of practical interest to our readers are respectfully solicited from those who can write authoritatively on hospital architecture and equipment, institutional efficiency, and administrative medicine. Articles are accepted for publication with the understanding that they are contributed solely to THE MODERN HOSPITAL. French and German articles will be received and translated free of charge if found desirable for publication.

REPRINTS.—100 reprints of original articles will be furnished gratis to authors making the request, which request must accompany the manuscript. Covers of these and extra reprints will be furnished at cost.

ILLUSTRATIONS.—Such half-tones and zinc etchings as in the judgment of the Editors are necessary to illustrate articles will be furnished when photographs, drawings, or ink tracings are supplied by the author.

NEWS MATTER.—Our readers are requested to send in items of news, and also marked copies of newspapers containing matters of interest to those engaged in hospital work. We shall be glad to know the name of the sender in every instance.

SUBSCRIPTION BLANK.

The Modern Hospital Publishing Co., Inc.,
Business Office—Metropolitan Building,
St. Louis, Mo.

You are hereby authorized to enter subscription to THE MODERN HOSPITAL for the undersigned, beginning with the next issue. The price is Three Dollars a year, payable on receipt of statement.

Name.....

Street.....

City..... State.....

NEWS OF THE HOSPITAL FIELD

Dr. A. E. B. Alford is building a $25,000 hospital at Bainbridge, Ga.

A hospital is soon to be erected at Yorktown, Tex., by Dr. G. W. Allen.

Dr. Fred L. Potts, Vanceboro, N. C., is planning to build a private hospital.

A new county hospital was opened at Boise, Idaho, about November 1.

Dr. Merton Field is fitting up a 10-bed private hospital at St. Peter, Minn.

The Conrad Hospital, Conrad, Mont., is operating in a new 30-bed building.

The Physicians and Surgeons' Hospital, of Wilmington, Del., is to be enlarged.

A fund of $50,000 has been raised at Independence, Ia., to build a community hospital.

The laundry of the State Hospital at Norristown, Pa., was destroyed by fire November 8.

Dr. Richard T. Sealy, Santa Anna, Tex., has plans for a private hospital to cost about $10,000.

The Monmouth Memorial Hospital, Long Branch, N. J., has opened a new fireproof laboratory.

The New Jersey Orthopedic Hospital, Orange, N. J., is seeking $200,000 to build an addition.

Rensselaer county, N. Y., has voted $150,000 for the erection of a tuberculosis sanatorium.

A community hospital with a capacity of 30 beds was opened at Norwood, Mass., in October.

The Hebrew Home for the Aged, Brooklyn, N. Y., has purchased a site for a hospital building.

The Lamb-Fish Lumber Company, Charleston, Miss., will soon begin the erection of a hospital.

The Red Cross Hospital, San Mateo, Cal., is planning an addition to be used as a maternity ward.

It is reported that a Catholic sisterhood is planning to build a hospital at Hastings, Neb., next spring.

Contract has been awarded at Whitehall, Wis., for the erection of a community hospital to cost $11,000.

A $150,000 building in course of erection for All Souls' Hospital, Morristown, N. J., is about ready for the roof.

Miss Nell Phillips has resigned the position of superintendent of nurses at the Parkland Hospital, Dallas, Tex.

Dr. P. L. Fuson is one of the directors of the Continental Miners' Hospital, a new corporation at Pineville, Ky.

Bowling Green, Ky., is to have a $50,000 hospital if plans of the Warren County Medical Society are carried out.

The Mennonite Deaconess Home and Hospital, American Falls, Idaho, has opened a branch hospital at Salem, Ore.

A fund of $125,000 has been raised in San Diego, Cal., to build a new home for St. Joseph's Sanatorium, of that city.

Dr. J. J. McDonald has recently assumed the duties of superintendent at the Jersey City Hospital, Jersey City,

BROSIA MEALS

Delicious, Inexpensive, Wholesome Foods

PEASE BROSIA
BEAN BROSIA
LENTIL BROSIA

Made from Pease, or Beans, or Lentils—which first are steam cooked, then toasted dry, then ground into meal.

Brosia Meals are real substitutes for meat—richer even than beefsteak in the tissue food protein:

Brosia Chicken Soup

Use the bones from a roasted fowl. Cover with cold water and simmer until the bones can be removed clean. Add water as it simmers away so that you have two quarts of stock at the finish. Season with salt and pepper and add one-third cup of pease meal wet with cold water, and beat into the boiling soup. Cook 15 minutes and serve. Any chicken stock may be used. Canned chicken soup is very good with Brosia Meals.

Beefsteak — 20.3% Protein	Pease Brosia . .	24.6% Protein
	Bean Brosia . .	22.5% Protein
	Lentil Brosia . .	25.7% Protein

(Farmers' Bulletin No. 249, U. S. Department of Agriculture)

Foods for Growth and Repair—Palatable and Easily Prepared

Ideal in the Hospital—For the well or the ill. For convalescents. For diabetics. For sufferers from gout and rheumatism.

Brosia Lentil Bread

1 cup graham flour
1 cup bean or lentil meal
½ cup corn meal
½ cup white flour
1 teaspoon salt
½ cup molasses
½ teaspoon soda
2 cups milk or water

Sift the flour, meals, and salt. Add molasses, the soda dissolved in a little water and the liquid to make a stiff batter. Pour into a buttered steamer and steam three hours.

Dietitians appreciate the ease and quickness with which a variety of appetizing dishes may be prepared.

The expert culinary authority, Mildred Maddocks, has written for us a book of Brosia recipes for Soups, Breakfast and Luncheon Dishes, Muffins and Breads, with particular reference to the requirements of Hospitals and similar institutions.

24 INTERESTING PAGES
SEND FOR A COPY

Calumet Tea & Coffee Co.
409-411 W. Huron St. CHICAGO, ILL.

N. J., which has under way extensive improvements, including the erection of an addition for patients and a nurses' home.

There is a movement on foot among the business men of Le Mars, Ia., to establish a community hospital at that place.

A site has been purchased at Highland Park, Ill., for a community hospital, which will be erected at a cost of $30,000.

The Barnesville Hospital, a new 10-bed community institution, will be opened at Barnesville, Minn., about December 1.

Students and graduates of the state normal school at San Jose, Cal., are raising a fund to build a hospital for the school.

Marathon county, Wis., will open a new 40-bed tuberculosis hospital in the town of Stittin, near Wausau, about January 1.

Miss Colvin, for the last three years superintendent of the Royal Columbia Hospital, New Westminster, B. C., has resigned.

Walworth county, Wis., will build a $20,000 hospital. Dr. Edward Kinne, of Elkhorn, is in charge of the preliminary planning.

The Clarence Barker Memorial Hospital, Biltmore, N. C., has recently opened a new addition erected at a cost of about $20,000.

Dr. Arthur E. Guedel has resigned the superintendency of the Protestant Deaconess Hospital, Indianapolis, to take up private practice.

Miss Clara Kosloski has resigned the superintendency of the Emergency Hospital, Herkimer, N. Y., and returned to her home in Utica.

Mrs. Ida Squyer, a nurse of considerable experience in the section around Lakeport, Cal., has opened a general hospital at that place.

The city of New Orleans has opened a new isolation hospital at North Rampart and St. Louis streets, equipped to care for 40 patients.

Plans for the erection of a nurses' home to cost $50,000 have been announced by the Asbury Methodist Deaconess Hospital of Minneapolis.

The Huntington Hospital, Huntington, L. I., is planning a $12,000 addition to provide additional private rooms and quarters for a laboratory.

New maternity and accident wards constructed at a cost of $25,000 have recently been opened by the Hahnemann Hospital, Scranton, Pa.

The Wesley Memorial Hospital, Atlanta, Ga., is having plans drawn for a $30,000 clinic and a seven-story hospital building to be erected next year.

Dr. Mathew J. Beistel, of Pullman, Wash., has purchased at that place a large residence property, which he will convert into a private sanatorium.

The Sioux Valley Hospital, a new community institution at Cherokee, Ia., will be opened about January 15 in a new building erected at a cost of $25,000.

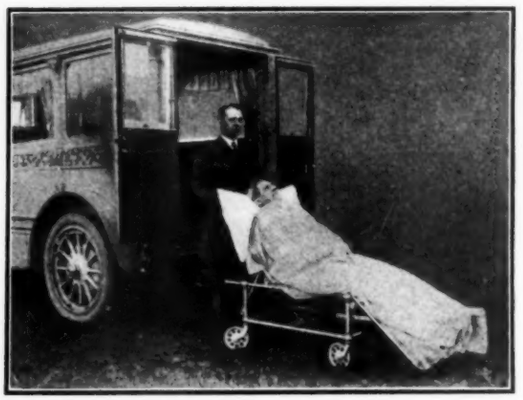
Dr. J. M. Dodd is president and Dr. A. P. Andrus is vice-president of an organization at Ashland, Wis., formed for the purpose of establishing a hospital.

Miss Letitia Greene, formerly superintendent of the Windber Hospital, Windber, Pa., has lately been placed in charge of the Johnstown (Pa.) City Hospital.

Plans have been completed for a $60,000 addition to the Children's Homeopathic Hospital of Philadelphia, and bids on the construction work are being considered.

George A. Collins, formerly commissioner of supplies of the city of Denver, has recently been appointed superintendent of the Denver City and County Hospital.

On the occasion of her departure recently from the Albany Hospital, Albany, N. Y., to accept the position of superintendent at the Geneva (N. Y.) City Hospital, Miss Susan C. Hearle, for eight years superintendent of the



At last!

a humane conveyance for the sick or injured

***The* BOMGARDNER CHAIR-COT**

affords greater comfort to the patient, and permits an easier handling for those in charge of conveying the patient from the ambulance to the hospital or home and *vice versa.*

As an invalid chair the head and foot may be adjusted to any angle. As a stretcher the head may be raised and the foot lowered so that the patient will not be compelled to lie in a flat position.

Canvas suspended from 26 coiled springs gives greater comfort to the cot. Made of seamless steel tubing, light yet strong. Furnished in five finishes. Weighs 45 pounds.

Send for further particulars and prices

BOMGARDNER MANUFACTURING CO.
Manufacturers CLEVELAND, O.

Electrically Lighted Surgical Instruments

From the best material obtainable and by skilled workmen E. S. I. Co. instruments are made. Not alone are we the originators, but, as well, we are exclusive manufacturers of the most valuable diagnostic instruments now in use. Their position is firmly established and their usefulness is unquestioned by any who have tried any of the following:

Holmes Naso-Pharyngoscope
Jackson Bronchoscopes and Laryngeal Specula
Tuttle and Lynch Procto-Sigmoidoscopes
Braasch Cystoscopes
Koch, Swinburne and Young Urethroscopes, etc.

For the convenience of the busy practitioner, some of the most generally useful instruments have been assembled into a

General Diagnostic Outfit

Battery

This outfit weighs 4½ pounds and measures 3½x7x15 inches. It is compact and easily carried. All our instruments are equipped with tungsten lamps, which may be operated on our battery or by means of our socket current controller.

Be sure each instrument is stamped "E. S. I. CO."

A copy of our illustrated and descriptive Catalogue will be sent on request

Electro Surgical Instrument Co.
Rochester, N. Y.

Impervo

IS THE NAME OF THE GUARANTEED

FOR HOSPITAL USE **Waterproof Sheeting and Sheets**

NOT experimental, as it has been used by hospitals and physicians for nine years.

Reg. in U. S. TRADE IMPERVO MARK Pat. Office

Contains no rubber — positively impervious to oil, grease, acids, blood, urine, or other deposits—easily cleaned with soap and hot water — can be sunned, aired, and steam-sterilized without cracking, blistering, or peeling—sanitary, soft, and durable.

SOLD UNDER A BINDING GUARANTEE

We also specialize in Rubber Sheeting for hospitals—genuine rubber, thoroughly vulcanized—highest quality.

Send for Armstrong price list and samples.

E. A. Armstrong ImpervO Co.
143 N. Dearborn Street CHICAGO, ILL.
Armstrong Service means "Good" Service and Dependable Goods

These Hospitals

Illinois Central Hospital, Chicago, Ill.
Oklahoma Hospital, Tulsa, Okla.
Lynn Hospital, Lynn, Mass.
Municipal Pier Hospital, Chicago, Ill.
St. Mary's Hospital, Pueblo, Colo.
Fairview Hospital, Minneapolis, Minn.
Sacred Heart Hospital, Fort Madison, Iowa.
Mary Thompson Hospital, Chicago, Ill.
The Leo N. Levi Memorial Hospital, Hot Springs, Ark.
Iowa Miners' and Industrial Hospital, Des Moines, Ia.
Ford Hospital, Omaha, Neb.
Anchorage Hospital (U. S. Dept. of Int.), Anchorage, Alaska.
J. Lawrence Free Public Hospital, New London, Conn.
West Side Hospital, Chicago, Ill.
Homeopathic Hospital (State University), Iowa City, Ia.
District Tuberculosis Sanatorium, Springfield, Ohio.
Hospital of the House of St. Giles the Cripple, Brooklyn, N. Y.
Indiana Hospital, Indiana, Pa.
German Evangelical Deaconess Hospital, Chicago, Ill.
St. Joseph's Mercy Hospital, Dubuque, Iowa.
Valmora Sanatorium, Valmora, N. Mex.
University Hospital, Kansas City, Mo.
St. Joseph's Hospital, Mishawaka, Ind.
Dakota Deaconess Hospital, Brookings, S. D.
City Hospital, Henderson, Ky.
Lutheran Hospital of Manhattan, New York, N. Y.
Hahnemann Hospital, Chicago, Ill.
Edward Mason Dispensary, Portland, Maine.
Post-Graduate Hospital, Chicago, Ill.
St. Anthony Hospital, Carroll, Iowa.
Miners' Hospital of New Mexico, Raton, N. Mex.
Jefferson County Hospital, Fairfield, Iowa.
Danish Mission Hospital, Hsiu Yen, China.
Abbott Hospital, Oskaloosa, Iowa.
Chicago-Winfield Tuberculosis Sanitarium, Winfield, Ill.
St. Joseph's County Tubercul's Hosp., South Bend, Ind.
Henrotin Memorial Hospital, Chicago, Ill.
St. Francis Hospital, Evanston, Ill.
West Frankfort Hospital, West Frankfort, Ill.
Illinois Steel Co. Hospital, Chicago, Ill.
St. Francis Hospital, Peoria, Ill.
North Chicago Hospital, Chicago, Ill.
Washington Blvd. Hospital, Chicago, Ill.

knowing the saving, the advantages, and the greater satisfaction, use

P·R·SYSTEM

Forms for Hospital Records

The P R Line of Stock Forms includes

Clinical Records	Operation Blanks
Clinical Charts	Anesthesia Records
Maternity Records	Instruction Sheets
Summary Sheets	Analysis Sheets
Admission Cards	Infants' Sheets

Disease and Complication Cross Index Cards
Combination Admission and Ledger Cards
and other Hospital Forms

Also forms for the Accounting Department and Business Office

Send for samples and descriptive literature

PHYSICIANS' RECORD COMPANY
1120 Morton Building, Chicago

training school at the Albany Hospital, was tendered a farewell dinner by the graduate nurses of the institution, and presented with a purse of gold in appreciation of her work and personal association.

Dr. R. L. Pittman, of the staff of the Highsmith Hospital, Fayetteville, N. C., is planning the erection of a private hospital, which will be located in Fayetteville.

A new Masonic hospital has recently been opened at Elizabethtown, Pa. The building was erected and equipped by lodges of the order in Philadelphia at a cost of $60,000.

Mt. Sinai Hospital, Philadelphia, has invited bids on the erection of a three-story addition to contain surgical wards, private rooms, a laboratory, and quarters for interns.

Dr. Edward A. Krusen, a prominent homeopathic physician of Norristown, Pa., has purchased at that place a site for a private hospital, which he will erect in the near future.

The Pasadena Sanatorium, Pasadena, Cal., owned by Dr. T. W. Bishop, was burned November 16. Thirty patients in the building at the time of the fire were safely removed.

An organization has been formed at Independence, Ia., looking toward the establishment of a community hospital, and efforts are being made to raise a building fund of $175,000.

Dr. David Paulson, founder and medical superintendent of the Hinsdale Sanitarium, Hinsdale, Ill., died recently at Asheville, N. C., where he went in the hope of improving his health.

The will of the late Mrs. Mary A. Avery, of San Francisco, recently admitted to probate, includes a bequest of $125,000 for the establishment of a free hospital for incurable children.

The public health and child welfare committees of the Green Bay (Wis.) Woman's Club are arranging to establish a free dispensary in connection with St. Mary's Hospital of that city.

J. A. Seager has assumed the duties of superintendent at the Bath Hospital, Bath, N. Y., succeeding Miss Katherine Belknap, who is spending the winter with relatives at Grand Bay, Ala.

Dr. A. G. Tullar has resigned the superintendency of the hospital operated at Cle Elum, Wash., by the Roslyn Cle Elum Beneficial Association, and will enter private practice at Portland, Ore.

St. Mary's Hospital at Watertown, Wis., has launched a campaign to raise $100,000 for the erection of new quarters. A four-story and basement fireproof building, 208 by 50 feet, is planned.

Miss Katherine Dempster, superintendent of the Presbyterian Hospital, Pittsburg, Pa., has resigned, and will be succeeded about the middle of December by Miss Jean Cruickshank, of Chicago.

An effort will be made at Tulsa, Okla., to raise $100,000 for the erection of a hospital to be conducted by sisters of the Order of St. Francis, now connected with St. Francis Hospital, Wichita, Kas.

Miss Gertrude Moore, R. N., of Minneapolis, Minn., and formerly connected with hospitals in Missouri, has recently accepted a position as superintendent of the Lewistown Hospital, Lewistown, Pa.

The Milwaukee Protestant Home for the Aged, Downer and Bradford avenues, Milwaukee, is looking forward to the erection of a $50,000 addition, a part of which will be devoted to hospital purposes.

Dr. J. A. Guthrie, Huntington, W. Va., has completed extensive improvements in his private hospital in that city, including the remodeling of the building and the installation of much new equipment.

The General Hospital of East Stroudsburg, Pa., has just had installed through the efforts of an energetic ladies' auxiliary, a fine, new x-ray machine, and the trustees are launching a campaign to raise funds for building purposes. Miss Harriett Davis, R. N., superintendent of this institu-

HOSPITAL RUBBER SUNDRIES

WATER BOTTLES

A wide variety of styles at prices varying in accordance with quality.

Our BLUE LABEL BRAND is the hospital favorite, being a molded, all-rubber, seamless bottle, with a wide neck to insure easy and quick filling and a holdfast chain stopple. Sanitary and easily kept so.

ICE CAPS

Several different styles, with No. 1838 having the preference among hospitals.

No. 1838 is a cloth-inserted, screw-top, rubber-coated, and serviceable cap, well worth its cost.

May we send you our booklet describing the above and our complete line of Hospital Rubber Sundries?

A. R. UNDERDOWN'S SONS — PHILADELPHIA
Established 1838 — 202-204 Market St.

ETHER PRO NARCOSI

This Ether Sulphuric for anesthesia is prepared by a recently patented process of purification by which all of the impurities that are ordinarily found in Ether are entirely removed.

Our product has a boiling point of 34° to 36° Centigrade, a specific gravity of .709 to .710 at 25° Centigrade; it leaves no residue on evaporation and will show negative results when tested for impurities.

OUR CLAIM IS THAT NO ETHER EQUAL IN PURITY HAS BEEN OFFERED TO THE MEDICAL PROFESSION UP TO THE PRESENT TIME.

This Ether is manufactured under a process protected by U. S. letters patent No. 1189602, July 4, 1916.

ALBANY CHEMICAL COMPANY
ALBANY, N. Y.

Jiffy-Jell

The Supreme Gelatine Dessert

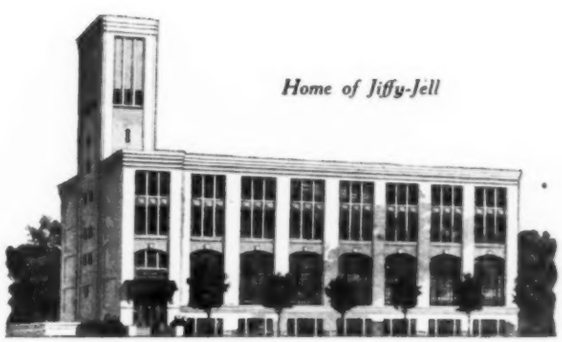
TRUE FRUIT FLAVORS IN VIALS

Mr. Otis E. Glidden, the great gelatine expert, has created a new grade of this fruity, quick dessert.

It requires a rare-grade gelatine. So he has formed a partnership with the men who make that grade.

They have built in Waukesha a white enameled kitchen—the model food plant of the country.

There this extra grade dessert — called Jiffy-Jell — is made under Mr. Glidden's direction.



Home of Jiffy-Jell

FRUIT JUICE FLAVORS

One feature of Jiffy-Jell is the true fruit juice flavors. Each is made from the fruit itself. Not one is artificial.

This fact gives Jiffy-Jell an appetizing zest, unknown in old-time gelatine desserts.

Jiffy-Jell itself and these pure fruit flavors have met the approval of the Westfield standards. Also of Dr. Wiley, who stars this product in "Good Housekeeping." No other ready-to-use-gelatine dessert has met with like approval.

SEALED FLAVORS

Each flavor comes sealed in a separate vial. So it keeps its freshness until used.

Under former methods the flavor came mixed with the gelatine in these quick desserts.

In Jiffy-Jell the boiling water which you add doesn't scald the flavor. You add the flavor when dessert has partly cooled. Thus you get a natural uncooked flavor.

Jiffy-Jell comes sweetened and in proper color, ready for instant use.

The inner package is waxed to protect it from moisture.

It offers, in vials, choice of seven fruit flavors—raspberry, strawberry, cherry, orange, lemon, lime, and pineapple.

One package makes from six to eight dishes.

Jiffy-Jell will give you a new conception of these delicious and healthful desserts.

Ask us for samples.

WAUKESHA PURE FOOD COMPANY **Waukesha, Wis.**

tion, has tendered her resignation to take effect December 1. Miss Davis will return to her home in Wilkesbarre and resume private nursing.

The Salem Hospital, Salem, Ore., is taking steps towards the erection of new quarters. The old building and grounds of the institution were sold to the state some time ago and must be vacated soon.

Construction work has been started on a $50,000 addition to the Birmingham Infirmary, Birmingham, Ala. The building will provide room for a pathological laboratory and 45 beds for patients.

St. Anthony's Hospital, Carroll, Ia., will open a new 40-bed addition about the first of the approaching new year. The building will be devoted to the use of the surgical and maternity departments.

The San Francisco *Examiner* chronicles the death of Albert Eikerenketter, who up to three or four years ago had been for many years superintendent of the San Mateo County Hospital, San Mateo, Cal.

At the recent general election eight Illinois counties voted to establish sanatoriums for the treatment of tuberculosis. They are LaSalie, Adams, Livingston, Kane, McLean, Morgan, Champaign, and Ogle.

The William McKinley residence at Canton, O., now the property of St. Peter's Catholic Church, will soon be converted into an annex to the Mercy Hospital of Canton to increase the capacity of that institution.

The Laurel General Hospital was opened at Laurel, Miss., November 1 in a new building erected by Dr. T. H. Seay and others. Miss Grace D. Lieunance is superintendent. Fifty patients can be accommodated.

The State Tuberculosis Hospital, at Kearney, Kas., opened a new $50,000 main building November 20. The new unit is a diamond-shaped structure, designed to admit the maximum of sunlight at all hours of the day.

The Homeopathic Hospital, Pittsburg, Pa., has successfully concluded a financial campaign conducted for the purpose of raising $500,000 to liquidate its indebtedness. More than 15,000 persons contributed to the fund.

The new Van Wert County Hospital, a community institution erected at Van Wert, Ohio, by Geo. H. Marsh and others, was dedicated November 28. The building, with its equipment, is reported to have cost over $75,000.

Announcement has been made by the trustees of the West Philadelphia Homeopathic Hospital, Philadelphia, that a maternity annex and a dispensary will be erected in connection with this institution in the near future.

San Francisco Association for the Study and Prevention of Tuberculosis is urging that an item of $200,000 for the erection of a tuberculosis sanatorium in the country be included in the next municipal appropriation budget.

The Kelso Sanatorium, conducted at Bloomington, Ill., by Dr. Geo. B. Kelso, has opened a new three-story surgical pavilion. The building is fireproof, and is said to be very thoroughly up-to-date, both in construction and equipment.

Dr. Donald B. Armstrong, former director of the department of social welfare of the New York Association for Improving the Condition of the Poor, has lately become connected with the National Tuberculosis Association.

The Edward W. Sparrow Hospital at Lansing, Mich., finds it necessary to enlarge its capacity, and arrangements will be made to begin the erection of an addition at an early date. The hospital is now limited to about 75 beds.

A new superintendent of nurses has recently assumed her duties at the Agnew Hospital and Sanatorium, San Diego, Cal. She is Miss Julia Chubback, of Chicago, who received her training in the Presbyterian Hospital of that city.

A "whirlwind" campaign conducted at Allentown, Pa., last month, and which had for its object the raising of $150,000 to build a new home for the Sacred Heard Hospital, of that city, resulted in subscriptions amounting to $183,000.

Miss Sally Johnson, assistant superintendent of nurses at the Peter Bent Brigham Hospital, Boston, has accepted

ETHER

FOR

ANESTHESIA

(MALLINCKRODT)

Chemical analyses and exhaustive comparative clinical tests have proven "M. C. W." **Ether for Anesthesia** to be **superior in every respect,** and led to its extensive use in many of the largest and foremost hospitals in this country and Canada.

We solicit inquiries from superintendents of hospitals, surgeons, and anesthetists interested in securing an Ether always uniform and of superior purity at moderate cost.

Mallinckrodt Chemical Works

ST. LOUIS NEW YORK

DON'T TAKE A CHANCE

on a

SCALDED PATIENT

when a

Powers Thermostatic Hot Water Controller

will make you

ABSOLUTELY SAFE

Especially adapted to Continuous Flowing Bath, Baby Bath, Shower Baths, and Hydrotherapy treatment generally.

Bulletins, Drawings, etc., on request

THE POWERS REGULATOR CO.

101 Park Avenue NEW YORK

5 So. Wabash Avenue CHICAGO

The Troy - Prosperity Garment Press

Tandem Arrangement

FROM one-half to again as much work can be handled upon a TROY-PROSPERITY GARMENT PRESS by installing two of the presses in the tandem arrangement as shown above, which is from four to six times that amount of work handled by an experienced hand-ironer in the same length of time.

THE TROY-PROSPERITY GARMENT PRESS is by far the most economical, the most efficient and the most satisfactory method of handling rough dry work in the hospital laundry, whether that laundry be located in a small 20-bed hospital or a 1,500-bed institution.

Write for interesting little booklet describing the construction, uses and advantages of this more satisfactory ironing machine and method.

Yes, the booklet gives the names of some of the many hospitals using the press, and the experiences in some cases. Write

THE PROSPERITY COMPANY, Inc.
SYRACUSE, N. Y., *Manufacturers*, or

Troy Laundry Machinery Co., Ltd.

CHICAGO SAN FRANCISCO TROY SEATTLE NEW YORK BOSTON

Wheatena

The All Wheat Food

for the run down system

There is no more nourishing, better vitality building food than ***Wheatena.*** Made from the best winter wheat obtainable and retaining all of the sweet, nutty flavor of the hard, plump grain.

It is appetizing and is as readily digested by the sick as it is by the well. ***Wheatena*** is very easy to prepare, the only precaution being in having the water boiling and bubbling before putting in the ***Wheatena.***

We will be pleased to send an amount for trial purposes to any hospital superintendent or dietitian so desiring. Just give the capacity of your institution and mention *The Modern Hospital* when writing.

The Wheatena Company
Wheatenaville, Rahway, New Jersey

an appointment to the position of superintendent of nurses at the Albany Hospital, Albany, N. Y., succeeding Miss Susan Hearle, who has lately become superintendent of the Geneva City Hospital, Geneva, N. Y. Miss Johnson is a graduate of the Massachusetts General Hospital, Boston. She will assume her new duties January 1.

Construction work has been started on a new plant for the Columbia Hospital, Milwaukee, which will ultimately represent an expenditure of $500,000. The first unit will cost about $100,000, and is designed to accommodate 65 patients.

Plans of Walkerville (Mich.) women to establish a community hospital, abandoned when the European war started, have been revived, and it is hoped that a large residence may soon be purchased and fitted up for hospital purposes.

The Western Pennsylvania Hospital of Pittsburg, Pa., announces the receipt of a donation of $50,000 from Mrs. Isabella Holmes Keech, of St. Louis, in memory of her late husband, William H. Keech, a former prominent Pittsburg business man.

A 60-bed tuberculosis hospital for the Choctaw and Chickasaw tribes of Indians will be opened in the Kiamichi Mountains, four miles from Talihina, Okla., in December. The building was erected by the Government at a cost of $50,000.

The Swedish Hospital, Brooklyn, N. Y., has begun the erection of an addition, which will provide a new operating room and 22 beds for patients. A new laundry and heating plant also are improvements soon to be made by this institution.

The Sisters of Charity of the Incarnate Word are considering the erection of a hospital at Alexandria, La. The order maintains a number of hospitals in the South, including one each at Shreveport and Lake Charles, La., and several in Texas.

The Alhambra Hospital, Alhambra, Cal., has been leased by Miss Maybelle Wellman, of Redlands, and Miss Helen Stuart Wood, of Pasadena, the former a graduate of the Lane Hospital, San Francisco, and the latter of the Pasadena Hospital.

Dr. Fernando Calderon, a native of the Philippine Islands, has been named by Governor-General Harrison to succeed Dr. William E. Musgrave as medical director of the Government hospital at Manila. Dr. Calderon was Dr. Musgrave's assistant.

A hospital built at Michigan avenue and Kraus street, St. Louis, two or three years ago and conducted by Dr. Matilda Tibbe for maternity cases, being closed after a short time, has recently been reopened under the name, "Carondelet Hospital."

The erection of a building to house the proposed Oklahoma State Baptist Hospital has been started at Oklahoma City. Dr. W. E. Dicken has been active in bringing about the establishment of the institution and it is announced that he will be the chief surgeon.

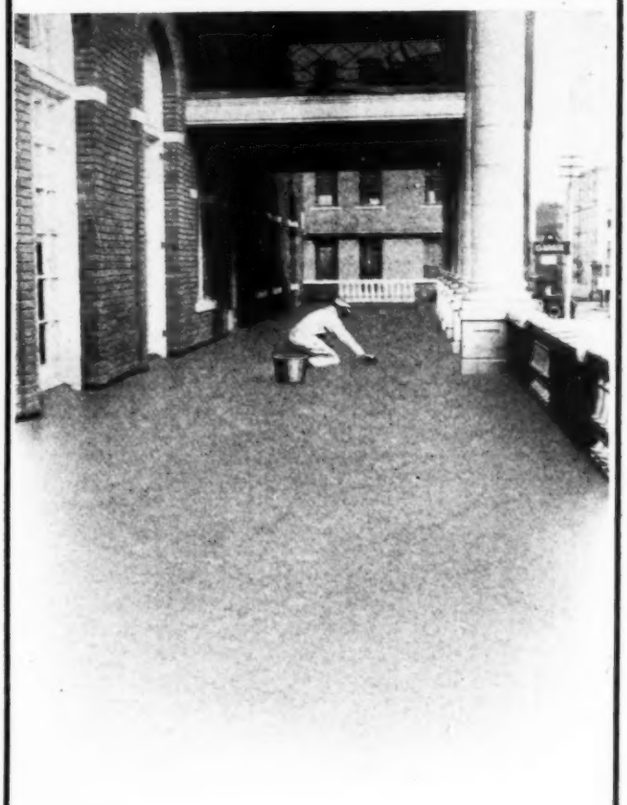
Dr. Stephen W. Stafford, recently appointed superintendent of the Charity Hospital, New Orleans, has assumed his duties at the institution after an extended northern tour, on which he visited hospitals in St. Louis, Chicago, Louisville, Buffalo, and New York.

Architect C. A. Boehme, of Minneapolis, is drawing plans for two new fireproof buildings for St. Andrew's Hospital, of that city. Accommodations for 75 patients are to be provided. The structures will be erected next spring at a cost of about $110,000.

According to newspaper dispatches from Portsmouth, Ohio, Dr. H. A. Schirrmann, of that city, is arranging to erect a private hospital costing about $75,000. The building will be a four-story brick and reinforced concrete structure, with a capacity of 70 beds.

James M. Anderson, for many years superintendent of the Clark Sanatorium, Stockton, Cal., opened a private sanatorium near Fruitvale, a suburb of Oakland, about November 1. Mrs. Gray and Miss Elpers, nurses, of Stockton, are connected with the institution.

Officials of El Paso county, Col., and the city of Colorado Springs are considering a plan to build a con-



MAS-OLEUM

Mastic Linoleum Floors

The Ideal in Hospital Floors

MAS-OLEUM FLOORS are sanitary, resilient, quiet, non-absorbent, dustless, and in many cases a less expensive flooring than wood.

MAS-OLEUM is laid like cement, but, unlike cement, tile, or cement composition floors, does not crack and can be repaired without any sign of the patch showing.

This flooring can be laid over old or new cement, wood, metal, or fabric exterior and interior floors or surfaces.

It is sold in packages ready for use, furnished to your contractor, or laid by us.

A postal will bring samples of MAS-OLEUM (Mastic Linoleum) and prices to you. Write

Mas-Oleum Floor Mfg. Company

11 South LaSalle St., Chicago

CHLORAZENE
Dakin's New Antiseptic

(Para-toluene-sodium-sulphochloramide)

This interesting antiseptic was introduced by Dr. H. D. Dakin, who was associated with Dr. Alexis Carrel at the temporary hospital No. 21 and the laboratories of the Rockefeller Foundation in Compiegne, France. Reports show this antiseptic is being used with great success in the military hospitals of Europe. (See British Medical Journal of January 29, 1916. Reprints on request.)

CHLORAZENE promises to be of great value in surgical practice. Read the following statements and it will be understood why this new antiseptic is regarded so favorably in Europe.

It is a white crystalline substance, freely soluble in water.

It is **extremely stable**—i. e., in solid form it may be preserved indefinitely, while aqueous solutions keep for a relatively long time without marked decomposition.

It has no corrosive action, even in concentrated solutions. It neither precipitates nor coagulates proteins, such as blood serum.

It is virtually non-toxic. Rabbits and guinea-pigs tolerate subcutaneous doses of a gram to a kilo (2 1-5 pounds) of body-weight, with no symptoms except moderate local reaction. However, it should not be used internally.

Its antiseptic action is intense. It is many times as antiseptic as phenol, equaling sodium hypochlorite in this respect (molecule for molecule it is four times as germicidal as hypochlorite), while, according to Dakin, "it is much less irritating than the latter substance, and may be used safely at a concentration five to ten times as great."

It can be used freely and safely as an irrigant of infected wounds of deep tissues, in treating compound fractures, and in injuries and diseases of the mouth, uterus, bladder, and urethra, where most antiseptics cannot be employed in effective concentration on account of their toxic or caustic action.

In view of the success which has followed the use of this antiseptic in Europe, The Abbott Laboratories offer it to the medical profession of America under the name CHLORAZENE-ABBOTT.

LITERATURE ON REQUEST

Packages and Prices

CHLORAZENE is supplied in 4.6-grain tablets, in bottles of 100 at 60c. In powder, two special packages for general and hospital use: Hospital Package No. 1, to make 1 gallon 1-percent solution, 55c; Hospital package No. 2, to make 5 gallons 1-percent solution, $2.00. Prices on larger quantities on request.

The trade will be stocked, but if your druggist is not supplied, we shall be glad to supply you direct from our home office or branches.

THE ABBOTT LABORATORIES

CHICAGO - NEW YORK

SEATTLE SAN FRANCISCO LOS ANGELES TORONTO BOMBAY

tagious disease hospital in connection with Beth-El Hospital at Colorado Springs, the cost to be about $24,000. The proposition has the indorsement of the Colorado Springs Chamber of Commerce, as well as of prominent citizens of both the city and county, and it is expected that the necessary appropriations will be made.

The Polyclinic Hospital is a new institution just opened at York, Pa. Miss Martha Kauffman, formerly connected as a nurse with hospitals in New York and Philadelphia, is the superintendent, and Miss Daisy Musselman, of York, has been appointed instructress of nurses.

The proposed Mississippi State Tuberculosis Hospital, toward the establishment of which the last state Legislature appropriated $25,000, will be located at Magee, where a site consisting of 100 acres of land has been donated. The erection of the buildings will be started soon.

Contract has been awarded at San Bernardino, Cal., for the erection of a new plant for the San Bernardino County Hospital, the cost to be $16,000. The plans, which were drawn by Architect Lyman Farwell, of Los Angeles, provide for reinforced concrete and brick construction.

Forty-six hospitals in New York cared for 132,615 patients last year, and 70 percent of this work was done without charge, according to a report of Frederick D. Greene, secretary of the United Hospital Fund, formerly the Hospital Saturday and Sunday Association of that city.

Several extensions are being planned for the Hospital of the Good Shepherd at Syracuse, N. Y., now operated in connection with Syracuse University. A maternity hospital will probably be the first building to be erected. This will be a four-story structure costing about $75,000.

Dr. J. D. Gray, who for a number of years has conducted the Shiner Hospital at Shiner, Tex., is moving to the town of Yoakum in the same state, where he will open a hospital in an office building with the view of later erecting a structure especially suited to hospital purposes.

The management of the Agnew Hospital and Sanatorium, San Diego, Cal., now accommodating about 100 patients, expects soon to double its capacity by the erection of a four-story addition. The institution is operated by a corporation, of which Dr. David Gochenauer is president.

At a recent meeting of the officers and stockholders of the Lutheran Hospital at Beatrice, Neb., it was decided to build a modern fireproof home for the institution as soon as the necessary preliminaries can be arranged. Plans will be drawn for a building to cost between $50,000 and $75,000.

A bond issue providing $75,000 for the purchase of a site and the erection of a tuberculosis hospital, also for a two-mill levy for the maintenance of the institution, was authorized by the voters of Dubuque county, Ia., on November 7. Twice as many votes were cast for the issue as against it.

The cornerstone of the maternity hospital being erected at Howard and Dupont avenues, Brooklyn, N. Y., by the Brownsville and East New York Hospital Association was laid with ceremonies on November 12. The building is to be a four-story brick structure, 60 by 80 feet, costing about $100,000.

The Hahnemann Hospital, Rochester, N. Y., will complete an addition to house pathological and x-ray laboratories by January 1. Dr. Ralph R. Mellon, of the Univerwill have charge of the new department, is already at the sity of Michigan Homeopathic Hospital at Ann Arbor, who hospital, working in temporary quarters.

A $100,000 building for negro patients will be the first unit of a group of new structures soon to be provided for the Memorial Hospital, Richmond, Va. The negro building will have a capacity of 148 beds, and it is estimated that the equipment will cost approximately $25,000. A trainschool for negro nurses will be maintained.

Miss Louisa Parsons, famous war nurse and one of the founders of the Johns Hopkins Hospital, died November 22 in England. She studied under Florence Nightingale and accompanied Lord Wolseley's Egyptian expedition in 1882, receiving decorations from the khedive of Egypt and Queen Victoria. She also saw service in the Spanish-American and Boer wars, and aided Clara Barton in relief

Increase Your Revenue

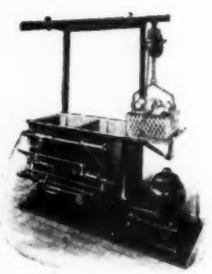
When you reduce the operating cost of your hospital by the adoption of scientific methods of management, you not only increase your revenue, but you also improve the effectiveness of your organization in taking care of the sick.

We have shown others how to increase their revenue by reducing their operating costs—perhaps we can show you.

You incur no obligation in consulting us concerning your problems.

Cornelius S. Loder and Associates

30 Church Street NEW YORK



For the Sake of Sanitation

Regardless of its economical features, every hospital should install and use a dishwashing machine for the sake of sanitation alone.

"Vortex" Dishwashing Machines

are efficient and economical in operation, reducing labor and breakage. Built in several styles to meet particular requirements. Let us send you descriptive literature.

The Hamilton-Low Co., New York

POMPEIAN OLIVE OIL

DOCTORS recommend Pompeian — its merit has won the endorsement of hospitals all over the country — for Pompeian — finest quality olive oil — is *always fresh.*

¶ The enlightened purchasing public is now, at last, face to face with the fact that olive oil cannot remain sweet and pure indefinitely — as tinned vegetables. They realize that olive oil is a commodity that should be handled with the same care as dairy products.

¶ Fresh eggs, fresh butter, sweet milk—and Pompeian Olive Oil — the up-to-date housewife places them in the same category. For the Pompeian Company — proud of its product and solicitous for the welfare of its consumers—jealously protects the sweetness of Pompeian Olive Oil.

Write for our book of selected salad recipes mailed free to any address.

FULL MEASURE TINS:
½ PINT, 25cts.; PINT, 50cts., Quart, $1.00.

THE POMPEIAN COMPANY
GENOA, ITALY
BALTIMORE, U.S.A.

ALWAYS FRESH-PURE-SWEET

Ready to serve

Wholesomely, thoroughly cooked, delicious vegetables and fresh beef

for convalescents

FULL-MEAL

Prepared and ready to serve—in the Diet Kitchen or when nursing in private homes—nourishing, quickly assimilated—guaranteed made of choice beef and selected vegetables—a well-balanced diet in itself—all food, no waste—with that appetizing home-made taste.

Can be served in a number of ways—recipe with each can. Appreciated by physicians and nurses everywhere. "Full Meal" is a full meal for two healthy adults.

At least give "Full Meal" a trial—ask your grocer, or send us 25c to cover cost and shipping for full size trial can Parcel Post Prepaid.

The Haserot Canneries Co.
Dept. 10 Cleveland, Ohio

FUMIDINE

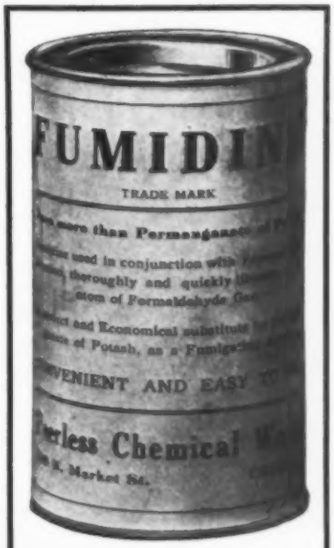
FUMIGATION

A Cheaper and More Efficient Fumigant

FUMIDINE is the most efficient and convenient method of Formaldehyde Gas Fumigation, the latter being recognized as the best and most effective fumigant known. It is even more effective and much cheaper than Permanganate of Potash.

Every atom of Formaldehyde gas is liberated quickly with FUMIDINE.

A few of the Chicago Hospitals using FUMIDINE are: Lake View, St. Luke's, Wesley, Garfield Park, Henrotin Memorial, Hahnemann, Washington Park, Home for Crippled Children, and many others.



A postal will bring a FREE TRIAL CAN

PEERLESS CHEMICAL WORKS, 180 NORTH MARKET STREET CHICAGO, ILL.

work after the Beaufort, S. C., flood. She opened the University of Maryland Hospital.

Construction work has been started on a $60,000 nurses' home for the City Hospital, Akron, O., and plans are being drawn for a new 80-bed hospital unit for the same institution. Graduates of the training school of this hospital have subscribed several hundred dollars to purchase teaching equipment for the new nurses' building.

A new hospital, built for the Somerset Hills Visiting Nurse Association, has been in operation at Bernardsville, N. J., since November 1. The building was donated by Mrs. Anthony R. Kuser in memory of her mother, Mrs. Cynthia Fairchild Dryden, widow of the late Senator John F. Dryden, and the institution will be called the Dryden Memorial Hospital.

The cornerstone of a new Jewish institution to be known as the Ladies' Bikur Cholim Kosher Hospital was laid in the Williamsburg section of Brooklyn, N. Y., November 5. For some time the Jewish women of this section have maintained a dispensary, the medical staff of which is headed by Dr. J. M. Goldberg, and the hospital is an outgrowth of this dispensary.

A new fireproof home in course of erection for St. Vincent's Hospital, Sioux City, Ia., is under roof and will be pushed to completion as rapidly as possible. The exterior construction is of reinforced concrete. Gypsum block partitions are specified, and metal bases and casings will be used. The corridors will have terrazzo borders and bases, with linoleum center. Private rooms will have cement floors, with metal bases. Linoleum will be used in offices, etc. Walls will be white enameled. The building is a four-story and basement structure, the ground plan being along the lines of the body and wings of an areoplane. It will cost about $150,000, and will have a capacity of 100 beds. William L. Steele, of Sioux City, is the architect.

Many readers of THE MODERN HOSPITAL will recall the genial and interesting personality of Daniel Hogan, nurse and inventor, who died at St. Mary's Hospital, Hoboken, N. J., late in October. Mr. Hogan received his training in nursing at Bellevue Hospital in the eighties, and for several years did private nursing, which gave him the opportunity to travel extensively in European countries. The last two decades of his life were devoted to the invention and improvement of nursing appliances and the demonstration of these appliances as the representative of Meinecke & Co., of New York. Mr. Hogan was a familiar figure at nurses' conventions, where his simple and unassuming manners, and the wit and philosophy characteristic of his race, won him many friends, and he had a wide acquaintance among the hospital superintendents of the country. About two years ago he had the misfortune to lose his wife, and after that time gradually failed in health.

STATEMENT OF OWNERSHIP, MANAGEMENT, ETC., REQUIRED BY THE ACT OF AUGUST 24, 1912

of THE MODERN HOSPITAL, published monthly at St. Louis, Mo., for October 1, 1916.

Editor, Dr. John A. Hornsby, Chicago, Ill., and the following associates: Dr. Henry M. Hurd, Baltimore, Md.; Dr. Frederic A. Washburn, Boston, Mass.; Dr. Winford H. Smith, Baltimore, Md.; Dr. W. L. Babcock, Detroit, Mich.; Dr. S. S. Goldwater, New York, N. Y.

Business manager, Dr. Otho F. Ball, St. Louis, Mo.; publishers, The Modern Hospital Publishing Company, Inc., St. Louis, Mo.

Owners, The Modern Hospital Publishing Company, Inc., St. Louis, Mo. Stockholders holding 1 percent or more of the total amount of stock: Dr. John A. Hornsby, Chicago, Ill.; Dr. Otho F. Ball, St. Louis, Mo.; Judge Irvin V. Barth, St. Louis, Mo.; E. M. Hornsby, Chicago, Ill.; L. M. Ball, St. Louis, Mo. There are no bondholders.

(Signed) OTHO F. BALL,
President The Modern Hospital Publishing Company, Inc.

Sworn to and subscribed before me this 23d day of September, 1916.

(Seal) ANNA H. PFEIFER,
Notary Public.

My commission expires November 26, 1919.

La Mode TRADE MARK REGISTERED

Nurses' Week

December 11th to 16th
Inclusive

We have arranged with dealers everywhere to offer you a

White
La Mode

Uniform
(either high or low neck)
Made of our Special
DuRance Cloth
FOR.....$3.00

If your dealer can't supply you, write Dept. T

La Mode

HAYS AND GREEN
352 FOURTH AVE. NEW YORK

465

IT'S AN EASY WAY

Sani-Flush cleans toilet bowls quickly and thoroughly. It takes away the unpleasant features of the task.

Sani-Flush

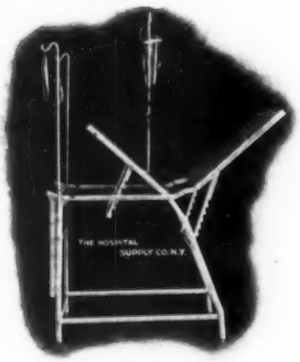
accomplishes by chemical action what you have tried to have your janitor do by scrubbing and brushing. It disintegrates the lime formation in the toilet bowl, so as to permit the easy removal of all stain and incrustation.

Just sprinkle a little of this powder into the bowl, let the solution remain for a few minutes, swab the bowl and flush.

Isn't it an easy way?

For prices and other information, write

THE HYGIENIC PRODUCTS CO.
628 Walnut Avenue, South CANTON, OHIO



OPERATING TABLES

From $12.00 to $375.00

An Illustration of the Variety of Designs of

Aseptic Steel Furniture

which the Company manufactures and which are described in

OUR NEW ILLUSTRATED CATALOGUE

(Just off the press)

THE MOST COMPLETE CATALOGUE

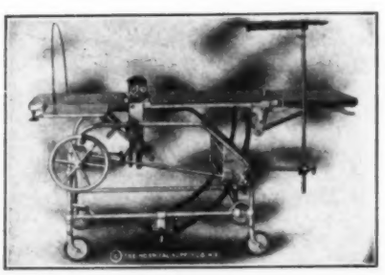
OF

HOSPITAL EQUIPMENT

issued in this country

IT DESCRIBES

Operating Tables of every description; Cabinets for Medicines, Instruments, and Supplies; Tables of every kind; Irrigators and Bowl Stands; Electric Lights; Beds and Cribs; Bedside Tables; Invalid Chairs; Nurses' and Doctors' Desks; Screens; Bath Cabinets; Massage Tables; Hot Air Apparatus; Stretchers and Litters, etc.



A copy of this catalogue will be sent on request to anyone legitimately entitled thereto.

Please send a copy of Catalogues, Sections "O" and "W."

Name _____

Position _____

Address _____

THE HOSPITAL SUPPLY CO.
55 Fifth Avenue
NEW YORK

Which Mineral Oil is Best for Medical and Surgical Use

?

1. That oil which is free from paraffin and all toxic, irritating or otherwise undesirable elements, such as anthracene, phenanthrene, chrysene, phenols, oxidized acid and basic bodies, organic sulphur compounds and foreign inorganic matter; because an oil of such purity will pass through the gastro-intestinal tract without causing irritation or other untoward effects.

2. That oil which possesses the highest natural viscosity, with the highest specific gravity, because such an oil will pass through the intestine more slowly than a lighter and thinner oil and lubricate the walls of the gut more completely, and soften fæces more effectually, and is not likely to produce dribbling.

3. That oil which is really colorless, odorless and tasteless, because palatability favors persistence in treatment.

The oil which meets all these requirements is

Liquid Petrolatum, Squibb

Heavy (Californian)

It is a pure, colorless, odorless and tasteless **Mineral Oil,** specially refined under our control only by the *Standard Oil Company* of *California,* which has no connection with any other Standard Oil Company. This oil has the very high specific gravity of 0.886 to 0.892 at 15°C. (or 0.881 to 0.887 at 25° C.) and has also an exceptionally high natural viscosity. It is sold solely under the Squibb label and guaranty and may be had at all leading drug stores.

E. R. SQUIBB & SONS, NEW YORK

CONTENTS

FOR DECEMBER, 1916

COVER—New Buffalo City Hospital, Buffalo, N. Y.

ORIGINAL ARTICLES.

First Units of the New Buffalo City Hospital 447
Messrs. Green & Wicks.

Four Years of the Washington County (Iowa) Hospital 456
C. A. Boice, M. D.

Army and Navy General Hospital at Hot Springs, Ark. 459
By our Special Correspondent, Washington, D. C.

Edible Pastes—Macaroni, Spaghetti, Vermicelli, Noodles 463
John Phillips Street.

Plans for a County Tuberculosis Hospital 466
Walter H. Watterson, M. D.
L. F. Sutton, M. D.

What Dispensary Work Should Stand For 467
Richard C. Cabot, M. D.

The Lighting of Hospitals in Great Britain 469
Sidney F. Walker.

Care of Alcoholics in the Modern Hospital 473
Charles B. Towns.

For Hospital Standardization 481
John G. Bowman.

Hospital Accounting and Finances 482
A. R. Warner, M. D.

EDITORIAL.

Before and After—The Hospital 476
The National Safety Council 477
Autopsies in Small Hospitals 477
Standardized First Aid in the Hospital 478
The Newer Hospital Service 479
The Small Community Hospital 479

HOSPITAL, MEDICAL, AND SPECIAL MEETINGS 480
American Hospital Association; Official Bulletin for December.

MISCELLANEOUS ARTICLES.

Purchasing Textiles for Hospitals 465
New York Seeks Clinic Doctors 472
Great Medical Center for Chicago 475
Margaret Teresa O'Donovan, Nurse (Poem) 479
Minimum Laboratory Equipment 517
Bedsores in the Hospital 517
The "Big Brother" Movement 518
Hospitals and the Control of Cancer 520
Float of the Battle Creek Anniversary Pageant 522

CURRENT HOSPITAL LITERATURE 487

INDEX OF HOSPITAL AND SANATORIUM LITERATURE 490

DEPARTMENT OF NURSING 491
The Value of a Course in Household Economics in the Training School—Teaching of Ethics in Schools of Nursing.

SOCIAL HYGIENE—VENEREAL DISEASES 495
Clinics for Venereal Diseases; Why We Need Them; How to Develop Them.

DISPENSARY AND OUT-PATIENT WORK 498
Dispensary Progress in Chicago—Methods of Admitting and Registering Dispensary Patients.

PHILANTHROPY AND THE PUBLIC HEALTH 501
How We Kept the Kiddies Out of Danger.

DEPARTMENT OF DIETETICS 503
Citrus Fruits in the Hospital—Food Selection for Rational and Economical Living—The Chemical Composition of Commercial Glucose and Its Digestibility.

INDUSTRIAL WELFARE 507
The Occupational Hazard in the Chemical Industry; the Need for Prophylaxis—Conduct a Bank for Employees.

QUERIES AND ANSWERS 511
Cost of Building and Maintenance—What an Annual Report Should Be—Partnership X-Ray Department—Responsibility for the Scientific Work—Another Doctor's Patient.

NEW INSTRUMENTS AND EQUIPMENT 514
Hipwood Pneumatic Crutch—Sanitary Waste Receptacle—A New Restraint Apparatus—Utility Chassis—Adjustable Artificial Limbs—The Rieber Roentgen Converter.

INDEX TO VOLUME VII, THE MODERN HOSPITAL ..... I to x

NEWS OF THE HOSPITAL FIELD ..... Adv. 34

INDEX TO ADVERTISEMENTS ..... Adv. 7, 8

CLASSIFIED ADVERTISING ..... Adv. 48, 50, 52, 54, 56

DIRECTORY OF HOSPITAL AND ALLIED ASSOCIATIONS ..... Adv. 58

DIRECTORY OF HOSPITAL SUPPLIES ..... Adv. 85, 87, 89, 91

"AMERICAN"

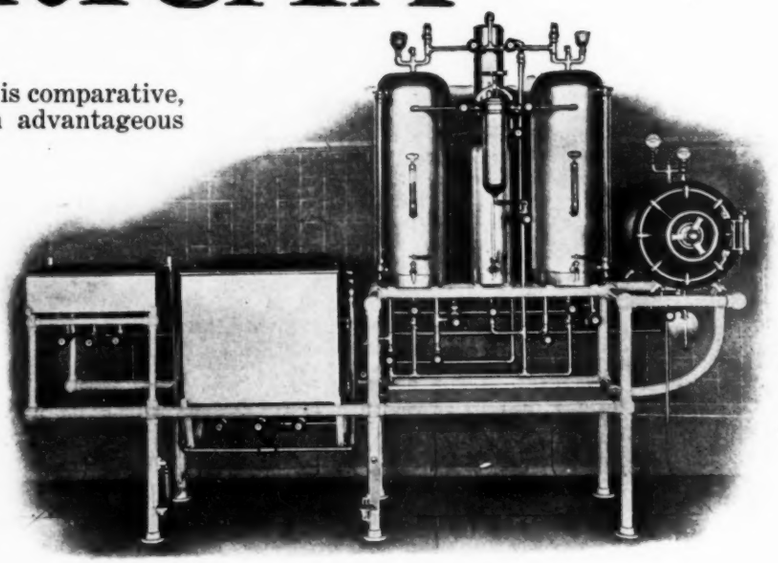
THE PRODUCT OF SPECIALISTS

BARGAINS!

Bargain is comparative, the ultimate object being an advantageous purchase.

"AMERICAN" Sterilizers have proved, through many tests and years of service, to be the one real sterilizer bargain, for the intrinsic value offered always far outweighs the trifling difference in initial cost over competition apparatus.

JUDGING STERILIZERS, as we do the achievements of men, in perspective, "AMERICAN" apparatus stands on its indisputable record as the ultimate lowest cost equipment obtainable.



COMBINATION WITH PATENTED DISTILLING EQUIPMENT (all rights reserved).
Note the 4 units and only 6 floor supports and 1 set of supply piping.

QUALITY EXPERIENCE SERVICE

AMERICAN STERILIZER CO., Erie, Pa.

CAMPHENOL is put up in 1-oz., 3-oz., and 8-oz. bottles and in 1-gal. and 5-gal. cans for hospital use. A sample phial will be sent upon request.

CAMPHENOL

A Modern Antiseptic

Hospitals, physicians, health boards, surgeons of many public institutions have tested CAMPHENOL, and all have agreed as to its value as a disinfectant. The number of years it has been upon the market and the amount of this product sold have demonstrated its reliability and usefulness for disinfecting purposes.

Although powerful and energetic as a germicide, CAMPHENOL is not dangerous; it is not corrosive and will not destroy clothing, fabrics or furniture. It leaves no stain.

CAMPHENOL mixes with water in all proportions and any degree of dilution desired may, therefore, be obtained.

It has many clinical uses—scarlet fever, throat gargle, puerperal septic conditions, cellulitis, wound dressing, ringworm, fevers in contagious diseases, carbuncles and boils, burns, mouth operations and as a general disinfectant and deodorant about the sick room and the hospital.

JOHNSON & JOHNSON **NEW BRUNSWICK, N. J.**

"I ASK your attention to the superior cleanliness and wholesomeness of canned foods as compared with the fresh vegetables which come long distances by wagon, boat, and rail, and are not offered for sale until several days—as much, sometimes, as a week intervening between their being taken from the gardens, orchards, or waters, and not until they have been exposed to numerous conditions of contact with dust, dirt, and contamination, whereas canned foods are packed close to the gardens, orchards, or waters, where the fresh, raw product is found in perfection as to ripeness and edible condition, and where the product is so handled by machinery that it is scarcely touched by human hands; being sealed hermetically, it is perfectly protected from contact with filth or contamination. Canned foods are clean, and therefore wholesome." — *From an Address by John A. Lee before Chicago Stewards' Club.*

MODERN food manufacture means in reality a high-class community kitchen for the preparation of food for many consumers. Therefore, it becomes a matter of public interest that the sanitary condition be of a high order. The community kitchens in which

CALIFO BRAND FOOD PRODUCTS

are prepared, comply in every possible particular with such demands. Cleanliness is gospel, and the welfare of the workers a most important consideration.

HOSPITAL SUPPLY DEPARTMENT

THE COAST PRODUCTS COMPANY

406-408 Market Street, SAINT LOUIS

DISTRIBUTING WAREHOUSES

CHICAGO INDIANAPOLIS KANSAS CITY MINNEAPOLIS
CINCINNATI OMAHA DES MOINES

ALSO EXCELLENT FACILITIES FOR DELIVERIES ON EITHER ATLANTIC OR PACIFIC COAST

FREIGHT PAID TO ANY RAILROAD STATION IN THE U. S. A.

"PROVEN BEST BY THE CAN-OPENER TEST"

SILVOL

A Powerful Germicide. Non-Toxic. Non-Irritating.

Contains approximately 20 per cent. of metallic silver.

Freely soluble in water; no sediment on standing.

Does not coagulate albumin; is not precipitated by proteids or alkalies.

Its germicidal power has been conclusively demonstrated clinically.

Indicated in the treatment of

Conjunctivitis,	**Laryngitis,**
Corneal Ulcer,	**Gonorrhea** (all stages),
Trachoma,	**Cystitis,**
Rhinitis,	**Posterior Urethritis,**
Sinus Infections,	**Vaginitis,**
Otitis Media,	**Cervical Erosions,**
Pharyngitis,	**Endometritis,**
Tonsillitis,	**Etc., Etc.**

Used in aqueous solutions of 5 to 50 per cent.

POWDER: Bottles of one ounce.

CAPSULES (6-grain): Bottles of 50.
Contents of two capsules make one-fourth ounce of a 10-per-cent. solution.

◆ ◆ ◆

SILVOL OINTMENT (5 per cent.), for application to regions where the use of an aqueous antiseptic solution is not feasible. Small and large collapsible tubes with elongated nozzle.

LITERATURE WITH EACH PACKAGE;
or it will be sent to any physician on receipt of request.

Home Offices and Laboratories,
Detroit, Michigan.

Parke, Davis & Co.

INDEX TO ADVERTISEMENTS

See Pages 85, 87, 89, and 91 for Directory of Hospital Supplies

	Page
Abbott Laboratories	43
Albany Chemical Company	38
Alsteel Manufacturing Company	84
American District Steam Company	64
American Electrical Heater Company	112
American Flooring Company	102
American Ironing Machine Company	100
American Laundry Machinery Company	27
American Magnesia Products Company	108
American Photo Chemical Company	26
American Sterilizer Company	4
American Thermos Bottle Company	60
American Wine Company	51
Angelica Jacket Company	23
Anheuser-Busch Brewing Association	114
Archer Rubber Company	14
Armstrong Impervo Company, E. A.	37
Art Metal Construction Company	81
Associated Tile Manufacturers	18
Atlas Floor Company	104
Baker Linen Company, H. W	59
Bard-Parker Company	91
Battle Creek Sanitarium	71
Becton, Dickinson & Co	88
Bernstein Manufacturing Company	22
Best Bros. Keene's Cement Company	106
Betz Company, Frank S	112
Bigelow, Chapin & Young	81
Bird & Co., J. A. & W	8
Bishop-Babcock-Becker Company	59
Blakeslee & Co., G. F	91
Blakeslee & Co., G. S	54
Blakiston's Son & Co., P	52
Bliss, Fabyan & Co	80
Blodgett Company, G. S	76
Bomgardner Manufacturing Company	36
Borden's Condensed Milk Company	15
Born Steel Range Company	16
Boston Varnish Company	94
Boyd Company, F. O	60
Boyle & Co., Inc., John	119
Brecht Company	65
Bromley-Merseles Manufacturing Company, Inc	111
Bryant Electric Company	20
Burdett-Rowntree Manufacturing Company	50
Burdick Cabinet Company	51
Burkhardt Company	54
Burton Range Company	115
Butler Back Rest Company	109
California Fruit Growers Exchange	101
Calman & Co., Emil	14
Calumet Tea and Coffee Company	35
Célestins Vichy	74
Chicago Signal Company	74
Chicago Wire Chair Company	56
Classified Advertisements	50, 52, 54, 56
Coast Products Company	5
Cocroft, Susanna	96
Columbus Aseptic Furniture Company	58
Columbus Laboratories	118
Con. Hospital Supply and Laundry Mach. Company	116
Consolidated Safety Pin Company	109
Cordley & Hayes	63
Corning Glass Works	47
Cunningham, Son & Co., Jas	98
Dahlstrom Metallic Door Company	113
Davis & Geck, Inc	29
Davol Rubber Company	53
Demmler & Schenck Company	30
Dickel & Co., Geo. A	86
Directory of Hospital and Allied Associations	58
Directory of Hospital Supplies	85, 87, 89, 91
Dixie Cotton Felt Mattress Company	119
Dorchester Pottery Works	16
Dougherty & Co., H. D	93
Dow Wire and Iron Works	29
Draeger Oxygen Apparatus Company	69
Draper Shade Co., Luther O	64
Eames Company	47
Eastern Drug Company	56
Eastman Kodak Company	75
Edmands, Walter S	93
Electro Chemical Company	19
Electro Surgical Instrument Company	37
E. Z. Patch Company	8
Faultless Caster Company	90
Fearless Dishwasher Company	57
Florida Citrus Exchange	105
Ford Company, J. B	94
Foster Bros. Manufacturing Company	80
Foster Rubber Company	62
Fries Brothers	76
General Electric Company	25
Grueby Faience and Tile Company	111
Hall & Sons, Frank A	117
Hall China Company	50a
Hamilton-Low Company	44
Hansen's Laboratory, Chr	84
Haserot Canneries Company	45
Hays & Green	46
Hoffmann & Billings Manufacturing Company	64
Hoffmann-La Roche Chemical Company	9
Hollister-Ashland Laboratories	68
Holtzer-Cabot Electric Company	17
Horlick's Malted Milk Company	23
Hospital Standard Publishing Company	10
Hospital Supply Company	1
Hotel LaSalle	111
Hygienic Products Company	46
Inner-Braced Furniture Company	92
I. T. S. Rubber Company	29
Jarvis & Jarvis	102
Johnson & Johnson	4
Kelley-Koett Manufacturing Company	79
Kesselring X-Ray Tube Company	78
Kny-Scheerer Company	66, 67
Kroeschell Bros. Ice Machine Company	59
Lake Geneva Sanitariums	73
Lane & Bro., W. T	110
Lentz & Sons, Chas	57
Leonard-Rooke Company	17
Lewis Manufacturing Company	76
Life Saving Devices Company	63
Lincoln Rubber Company	115
Loder & Associates, Cornelius S	44
Lorillard Refrigerator Company	23
Luminous Unit Company	60
Lyons Sanitary Urn Company	47
McCray Refrigerator Company	83
McIntosh Battery and Optical Company	79
McKesson & Robbins	49
Majestic Manufacturing Company	14
Mallinckrodt Chemical Company	40
Mandel Bros	92
Maplewood Mills	122
Mas-Oleum Floor Manufacturing Company	42
Mason, Davis & Co	19
Meinecke & Co	82
Mellin's Food Company	19
Mennen Chemical Company, Gerhard	82
Mercy Head-Rest Company	119
Metropolitan Hospital Supply Company	56
Meyer Company, Wm	78
Mississippi Wire Glass Company	74
Mohawk Clay Products Company	24b
Monroe Refrigerator Company	103
Moody's Sanitarium, Dr	72
Moore Bros	68
Mott Iron Works, J. L	12
Mueller & Co., V	110
Mulford Company, H. K	2d cover
Muller & Co., F. R	116
Myerson Printing Company, Sam'l F	106
National Hospital Bureau, Inc	68
National Marking Machine Company	15
National Resuscitating Apparatus Company	86
Neale Chemical Company	24b
Nestlé's Food Company	13
Never Split Seat Company	55
Northwestern Steel and Iron Works	99
Nurses' Outfitting Association	80
Oconomowoc Health Resort	73
O'Sullivan Rubber Company	100
Ostermoor & Co	53
Oxygen Gas Company	106
Pacific Coast Borax Company	80
Parke, Davis & Co	6
Patek Brothers	93
Peerless Freezer Company	108
Peerless Chemical Company	45
Perfection Manufacturing Company	88
Pepsodent Company	122

Continued on page 8.

INDEX TO ADVERTISEMENTS

Continued from page 7.

	Page
Permutit Company	11
Pfaudler Company	24
Physicians' Record Company	37
Pick & Co., Albert	83
Pittsburgh Lamp, Brass and Glass Company	24
Pompeian Company	45
Powers Regulator Company	40
Prosperity Company	41
Putnam's Sons, G. P.	13
Randall-Faichney Company	96
Read Machinery Company	21
Rech-Marbaker Company	33
Reid Bros.	24a
Reinhold Manufacturing Company	79
Relay Signal Company	96
Rhoads & Fillman	16
Rice Cereal and Milling Company	24
Richardson, Wright & Co.	113
Rosenwald & Weil	99
Royal Baking Powder Company	4th cover
Sachs, Frederick J.	21
Sacred Heart Sanitarium	72
Santiseptic Manufacturing Company	90
Sarco Company, Inc.	48
Scanlan-Morris Company	97
Security Window Guard Company	109
Sedgwick Machine Works	30
Sharp & Smith	116
Sheldon Company, E. H.	81
Shredded Wheat Company	10
Siebrandt, J. R.	63
Simmons Company	31
Smith & Davis Manufacturing Company	115
Smith's Sons Company, John E.	52
Southern Cypress Manufacturers' Association	121
Spencer Lens Company	78
Squibb & Sons, E. R.	2
Standard Medical Supply Company	112
Standard Oil Company	61, 95
Stanley Laundry Supply Company	59b
Stanley Supply Company	17, 109
Stephenson, C. H.	73
Taylor Instrument Companies	102
Terrell's Equipment Company	104
Toledo Technical Appliance Company	104
Tousey Varnish Company	3d cover
Towns Hospital, Chas. B.	70
Triumph Manufacturing Company	99
Troy Laundry Machinery Company, Ltd.	122
Underdown's Sons, A. R.	38
Union Wire Mattress Company	122
Utica Steam and Mohawk Valley Cotton Company	92
Van Range Company, John	117
Vitrolite Company	28
Vonnegut Hardware Company	21
Waldheim Park Sanatorium	72
Wappler Electric Company	79
Washable Name Tape Company	58
Washtik Company	49
Watson Manufacturing Company	100
Waukesha Pure Food Company	39
Waukesha Springs Sanitarium	72
Welch Grape Juice Company	9
Westinghouse Lamp Company	77
Wharton, Jos. S. L.	113
Wheatena Company	41
White Company	107
Williamson Heater Company	57
Winkler & Bro., Isaac	27
Wirt Company	55
Wocher & Son Company, Max	108
Worthington Company	117
Young Company, H. G. W.	84

See How Easy to Apply the

E.Z. SELF CEMENTING SELF VULCANIZING **PATCH**

You can time the whole operation, and be thru in less than 60 seconds. Now—ready!

Put the faulty glove on your hand (so that the surface around the tear or puncture is smooth), then a few brisk rubs with sandpaper to *rough* the fabric. Now, with a pair of tweezers or forceps, remove the fabric from the E. Z. Patch, moisten its RED, rubbery side with a drop of gasoline, and, after permitting this to dry for a few moments, place the moist side down over the puncture or tear, and press the patch with your thumb for a few seconds so it can firmly adhere.

All done, and all ready for sterilizing or boiling, where the patch will *actually vulcanize* to the glove.

It's there permanently—can't peel or come off, and it's non-poisonous and non-infecting.

A trial envelope containing 12 E. Z. Patches with full directions for 25c. Hospital size package, 100 Patches for $1.00. Sample on request.

THE E. Z. PATCH COMPANY
AKRON, OHIO

RIPOLIN
WHITE ENAMEL

Let Us Send You a List of Hospitals That Use Ripolin.

YOU will find in this list the names of most of the leading hospitals in America, also large numbers of smaller hospitals. The reason is that no paint has ever been compounded which meets Hospital requirements as Ripolin.

J. A. & W. BIRD & CO.,
Distributors for No. America
NEW YORK BOSTON CHICAGO
Write Dept. M for Valuable Data.

COSTS LESS
BECAUSE IT GOES FARTHER AND WEARS LONGER

"ROCHE"

To **Superintendents of Hospitals:** New York 1916

We would consider as a favor information of any case in which a higher price than the one current before the war is being charged for Digalen, Thiocol Tablets, Thiocol Syrup or Pantopon Roche (Pantopium Hydrochloricum).

Even of the few "Roche" specialties which have been temporarily exhausted we have sold every package to the last at exactly the same price as that current before the war, trusting that by so doing we would maintain the good-will of the physicians in the products until they again become available.

We ask for your co-operation in carrying through our policy of opposing every attempt at speculation at the expense of physician and patient

The Hoffmann-La Roche Chemical Works.

Welch's

Grape Juice

A WELCOME change in the necessarily limited diet of the invalid.

We will be glad to send our booklet, "The Food Value of the Grape." Send 25c for sample pint bottle.

The Welch Grape Juice Company, Westfield, N.Y.

The Food for the Day

is of far greater importance than all other restorative agents that promote recuperation from those ailments that come from faulty nutrition. Artificial "whips" will not always produce results. Strength must come from perfect assimilation of food that builds new tissue and nerve power.

Shredded Wheat Biscuit

has been found efficacious in thousands of cases of malnutrition when all other foods have failed. Shredded wheat is the life of the wheat steam-cooked, drawn into delicate, filmy, porous shreds, and then twice-baked. It is especially valuable in cases of intestinal torpor. Free samples are sent on application to physicians, nurses, and heads of hospitals.

"IT'S ALL IN THE SHREDS"

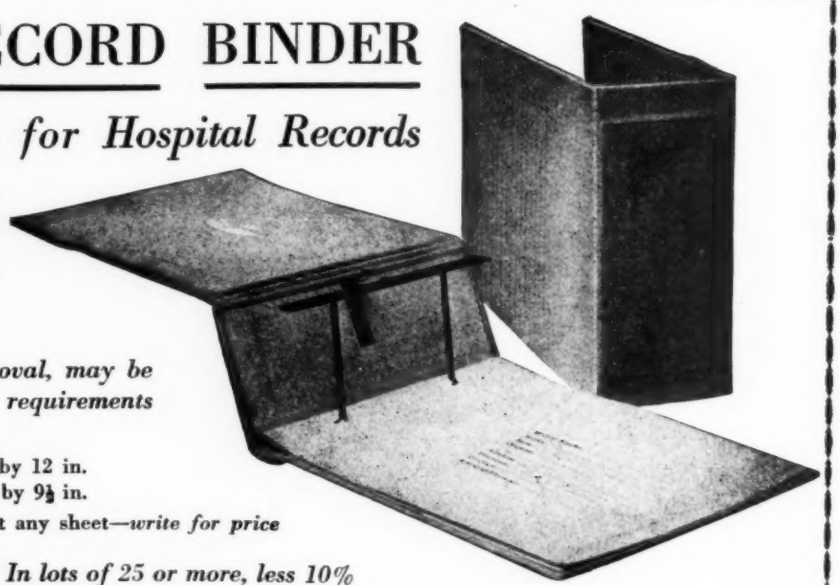
Made only by

The Shredded Wheat Company
Niagara Falls, N. Y.

HOSPITAL RECORD BINDER

The Standard File for Hospital Records

¶ Acknowledged at the American Hospital Association Convention at Philadelphia, as the most convenient, practical and permanent filing device for Hospital records.



One binder ordered on approval, may be returned if not suited to your requirements

Stock sizes { No. 1—9½ in. (bind side) by 12 in.
No. 2—11 in. (bind side) by 9½ in.

Special sizes (in dozen lots) made to fit any sheet—*write for price*

Price **$1.00** *Each* *In lots of 25 or more, less 10%*

Let us quote on your Charts and Records made to fit this binder

ALUMINUM CHART BOARD—LIGHT—DURABLE—SANITARY—*PRICE $1.00 NET*

LARGEST MANUFACTURER OF HOSPITAL CHARTS IN AMERICA—WRITE FOR CATALOG

Hospital Standard Publishing Co. - *31 S. Howard St.* - Baltimore, Md.

Ghent

What Science Approves and Practice Recommends, You May Adopt With Profit

1913

The three medals here shown—the marks of approval of scientists and technical experts—confirm the judgment of those hospital authorities who already have conceded supremacy in the water rectification world to

Permutit

TRADE MARK
REG. U.S. PAT. OFF.

The Water Softening Filter to Zero Hardness

San Francisco

The success of **Permutit** is due to the fact that it is based on the soundest scientific principles—it is fundamentally right in theory and in practice. When you buy **Permutit** apparatus, you are buying certainty of success—something not to be had from untried, unproved equipment offered you with a promise of "greatly reduced costs." A **Permutit** plant will remove all the hardness from any water, all the time, year after year—there are no qualifying "ifs." The dependability of **Permutit** has been proved by the acid test of service in America and abroad. Its permanent effectiveness—its year-after-year reliability—have been demonstrated in thousands of plants. Its record is established, its success is a fact. You cannot afford to experiment.

1915

If you are not using **Permutit**—or if you are attempting by other means to accomplish what **Permutit** alone can accomplish—you are neglecting an economy by which your institution might be profiting. Ask for a **Permutit** demonstration—let it prove itself.

Philadelphia

1916

THE PERMUTIT COMPANY

Water Rectification Exclusively

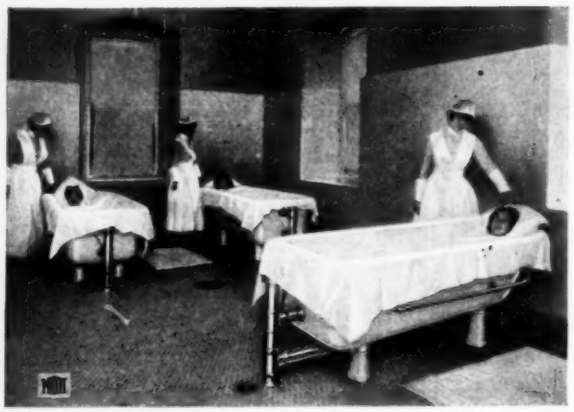
30 East 42nd Street **NEW YORK CITY**

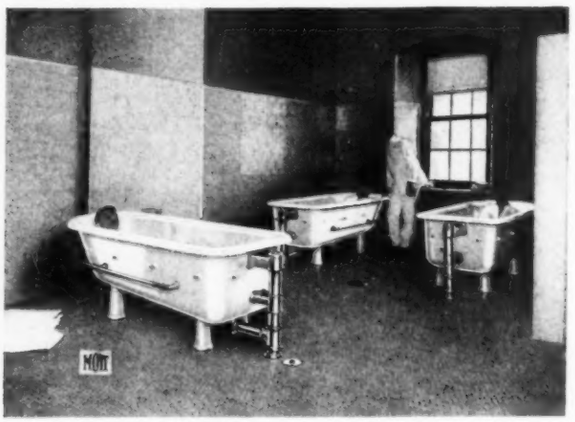
MOTT'S

HOSPITAL SANITARY APPLIANCES — HYDROTHERAPEUTIC APPARATUS AND EQUIPMENT FOR OPERATING AND STERILIZING ROOMS. AUTOMATIC HOT WATER SPECIALTIES FOR

Modern Hospitals, State Institutions and Sanitariums

Perfection in Hot Water Temperature Control at Morris Plains, Trenton, Vineland, Skillman and Other New Jersey State Institutions





The above interiors illustrate continuous flow or Hammock Baths in Male and Female Wards of the MORRIS PLAINS, N. J., STATE HOSPITAL.

Dr. B. D. Evans, Medical Superintendent, requires that the patients be bathed at predetermined temperature and volume maintained without fluctuation.

The hammocks are intended for the comfort of the patients and not for restraint.

The advent of a dependable device for the control of hot water temperature marks a new epoch in the evolution of Sanitary Appliances. Our 1915 Type Control Table represents a perfect Hydrotherapeutic Apparatus.

The Leonard Thermostatic mixing valve affords protection against scalding for all bathers subjected to excessively heated water, either in using the shower, ordinary bath tub, or special baths supplied from marble control tables provided with wall-cased thermometers, and otherwise assembled as shown.

Write us for description of apparatus furnished at the above and other prominent hospitals and state institutions.

The J. L. MOTT IRON WORKS

1828—Eighty-eight Years of Supremacy—1916

Fifth Ave. and 17th St., New York **Works at Trenton, N. J.**

BRANCHES: **Boston, Chicago, Philadelphia, Detroit, Minneapolis, Washington, St. Louis, Denver, San Francisco, Atlanta, Seattle, Portland (Ore.), Indianapolis, Pittsburgh, Cleveland, Kansas City, Salt Lake City, Houston, and Des Moines.**

CANADA: Mott Company, Ltd., 134 Bleury Street, Montreal, Quebec.

The results obtained from the use of two Hydrotherapeutic Departments at Morris Plains in years past emphasized the importance of water treatment. Hence the recent installation of 12 Continuous Baths in rooms properly lighted and ventilated.

We are prepared to duplicate the tiled wainscot and floor properly water-proofed. Write our Tile Department for estimate.

Our staff of Hospital Experts and the Engineering and Designing Departments are available to give service to our customers

"In the Hour of Need"

— when it becomes necessary to select a proper food for the baby denied its mother's milk — every confidence may be placed in

Nestlé's Food

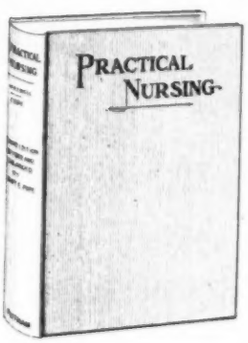
(A complete milk food--not a milk modifier)

Made from cereals and the best obtainable milk from healthy cows, Nestlé's Food is a highly nutritious, concentrated milk powder; it comes in air-tight cans; no hand has touched it; no germ can reach it; it requires simply the addition of the ***right amount of water and boiling for one minute*** to provide a **digestible, nourishing** and **sterile** food.

Nestlé's Food thus assures all the advantages of the most serviceable and satisfactory milk food—but with none of the dangers of inferior or varying quality, germ contamination, and spoiling common to fresh cows' milk.

SAMPLES ON REQUEST

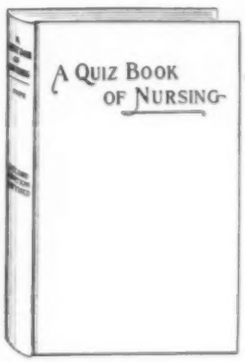
NESTLÉ'S FOOD CO., 2506 Woolworth Bldg., New York City



TWO BOOKS

that should be on a convenient shelf in every hospital

and two books that every hospital superintendent and teaching graduate or pupil nurse will find well worth while reading. They are



PRACTICAL NURSING

By A. C. Maxwell, Superintendent of School of Nursing, and by A. E. Pope, formerly Instructor in the School of Nursing, Presbyterian and St. Luke's Hospitals, San Francisco, Cal.

Treating on the following and other subjects in a thorough and educational manner, this book is helpful to both the teacher and the student as well as those in charge of nurses. Subjects: Qualifications for a Nurse; Etiquet, etc.; Bacteriology; Proper Ventilation in the Hospital; Care of Ward; Bedmaking and Lifting Patients; Care and Comfort of Patients; Bathing Patient; Symptoms; Counterirritants and Local Applications; Administration of Medicines; Preparation of Patients; Bandaging; Strapping and Bandaging; Care of Patients Before and After Operation; Surgical Dressing; Operating Room Technic; Food, Massage, References, and others.

Third Edition. Rewritten and Enlarged. Over 100,000 copies sold. Illustrated. Over 880 pages. Price, $2.00.

A QUIZ BOOK OF NURSING

By Amy E. Pope, formerly Instructor in the School of Nursing, Presbyterian and St. Luke's Hospitals, San Francisco, and by T. A. Pope, Supervisor of Visiting Nurses of the New York A. I. C. P.

This book asks and answers in question form hundreds of those problems confronting the nurse in her studies and also those confronting the graduate or teaching nurse in carrying on her work.

These questions and their answers concern such subjects as The Ward; General Care of Patients; Symptoms; Temperature; Pulse and Respiration; Treatment; Medicines; Surgical Nursing; Obstetrics; Care of Children; Disease; Hygiene; Bacteriology; Anatomy and Physiology; Food; Materia Medica; Visiting Nurses. A chapter is devoted to each of the following: Hospital Planning; Construction and Equipment; Hospital Bookkeeping and Statistics.

Second Edition. Revised. Price, $1.75 net.

Either or both of these books sent on approval. Write for complete list of other books in the Putnam Library for Nurses

G. P. PUTNAM'S SONS *Educational Dept.* 2 West 45th Street NEW YORK CITY

The Great
Majestic
SMOKEATER
SLICKTOP MODEL

The Perfect
HOSPITAL
RANGE
burns wood,
coal, or gas.

Used by
BARNES HOSPITAL
ST. LOUIS, MO.
To whom we refer by permission

Write Us

MAJESTIC MANUFACTURING COMPANY
Kitchen Specialties ST. LOUIS, MO.

Smooth as Tile
Hard as Nails
Clean as a Whistle

Enamolin

For use in your building—wherever a snow-white enamel is required—one that can "stand up" and remain snow-white in spite of continual scouring with soap and hot water or antiseptics.

We've a very special proposition to offer hospitals and institutions. Won't you write to us without delay for full particulars? Address Hospital Department

EMIL CALMAN & CO.
Established in 1850
100 William Street New York City

Do You Sterilize Your Rubber Sheeting?

You can do so with perfect confidence if your beds are covered with

Royal Archer

THE PERFECT RUBBER SHEETING

whether you boil, steam, or scrub with germicide or disinfectant.

Royal Archer will *not* grow soft and sticky; it will *not* crack or peel; it will *not* discolor water, sheet, or mattress under severe and repeated sterilization.

We have boiled it as long as thirty hours without loss of color, strength, resiliency, toughness.

Royal Archer *looks* different, *feels* different and gives a new and different service, because it is different in quality and methods of manufacture.

Samples and a copy of the strongest guarantee ever written for a postal.

Sold by all good dealers everywhere

ARCHER RUBBER CO., Milford, Mass.

Quality First

In Infant Feeding, when it becomes necessary to resort to artificial feeding, the first questions that a physician asks himself, as regards the food to be used, are:

What is it made of? How is it made? and Who makes it?

Gail Borden

EAGLE BRAND CONDENSED MILK

THE ORIGINAL

for sixty years has been specified almost invariably by physicians when prescribing Condensed Milk. The name "BORDEN'S" guarantees carefully selected raw material that is manufactured by the most improved and sanitary methods, insuring a finished product that is consistently uniform in composition and quality.

Samples, Feeding Charts in any language, and our 52-page book, "Baby's Welfare," mailed upon request.

Borden's Condensed Milk Company

"Leaders of Quality"

Est. 1857

New York

"This Little Book

certainly opened my eyes," said the hospital superintendent.

"I thought we could not improve on the marking in our linen and laundry departments. I had about decided that there was no way to secure more order and greater precision and speed. But along came this interesting booklet telling about the

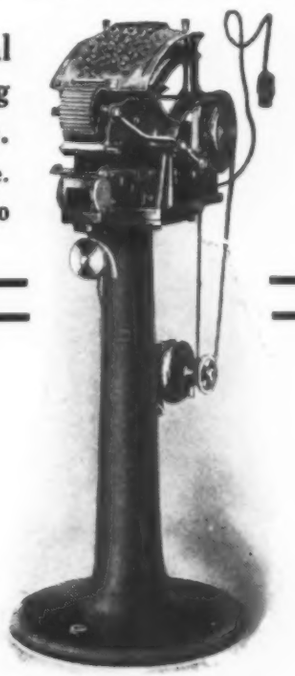
National Marking Machine

and the many advantages to be derived from its use in the laundry and linen departments. Well, I read the booklet and it convinced me that this machine should be investigated.

"Now, I'm certainly glad I got the booklet. I can't tell you all about the machine, but 'Better Marking in the Institution' will."

Send for it. It's free. Just write

The National Marking Machine Co.
1062 Gilbert Ave.
Cincinnati, Ohio



How About Nurses' Capes?

We have a special lot of 26-ounce, **all-wool Cadet Cloth,** of which we have secured a large quantity at about half price, and are making same up in nurses' capes in military style like cut, lengths to finger tips, at **$3.50** each. These are unlined, and, when soiled, can be laundered and pressed. Will always look new, and hardly ever wear out.

We are also making these same capes lined entirely throughout with all-wool red flannel at **$5.75.** Either of the above is about half price, and so much more convenient than a shawl. You cannot appreciate these capes without seeing them, and we will forward a sample cape on request for your inspection. If you retain the sample, we will charge it with your order, or, should you not be able to use it, you can return same; or we will sell the goods by the yard, 56 inches wide, at **$1.35 a yard. It takes 1¾ yards to make a cape.**

RHOADS & FILLMAN

1020-1022-1024 Filbert St. PHILADELPHIA, PA.

The Beauty of It

is its wonderful utility—which in a hospital is another word for it. Cannot corrode—won't flop around—can't even roll over—easily filled—easily cleaned—lasts forever, practically unbreakable. Retains its heat after filling with 3 quarts of boiling water for 20 hours. Patients will find it most companionable because it is

A Fine Old New England Product

The Henderson Foot Warmer is made of specially prepared potter's clays — then glazed. We think you will prefer it to either rubber or metal. We know thousands do. If you are not on our list, won't you let us send you a few special prices in quantity.

DORCHESTER POTTERY WORKS

48 Preston Street DORCHESTER, MASS.

P. L. RIDER, Distributing Agent, Worcester, Mass.

Dependable Service

Users of Born's kitchen outfits can rely on them with confidence. They have been thoroughly tried out and have a long record of successful performance back of them.

We furnish the kitchen, bakery, diet kitchen, and ward serving rooms complete.

Write for Catalogue No. 21

THE BORN STEEL RANGE COMPANY

CLEVELAND, OHIO

Without a Seam

Stanley "Durit" Hot Water Bags. Full capacity. Seamless. Made of extra heavy-gauge selected gum. Will not crack or harden. Designed for hospital use. All stopples are fitted with our Non-Losable Attachment.

Guaranteed for two years against defects due to faulty manufacture.

STANLEY SUPPLY CO.
118-120 East 25th Street NEW YORK

Holtzer-Cabot

Silent Signal Systems

All working or moving parts contained in a single unit consisting of a cord, plug, and locking button.

Signals can be reset only at the bedside of the patient.

Absolutely silent in operation unless an audible signal is desired.

Working unit may be instantly replaced by another should any accident occur to cord or button.

We recommend a low voltage system but are prepared to furnish a system com, plying with all insulation requirements.

Send for booklet 16H2

THE HOLTZER-CABOT ELECTRIC CO
BOSTON, MASS.
6161-65 SO. STATE ST. CHICAGO · 101 PARK AVENUE. NEW YORK · 1104 UNION TRUST BLDG. BALTIMORE

THE LEONARD VALVE
FOR
HYDROTHERAPEUTIC TREATMENT

THE Control Table and Continuous Flow or Hammock Baths that were exhibited at the Panama-Pacific International Exposition, San Francisco, 1915, and which were awarded the

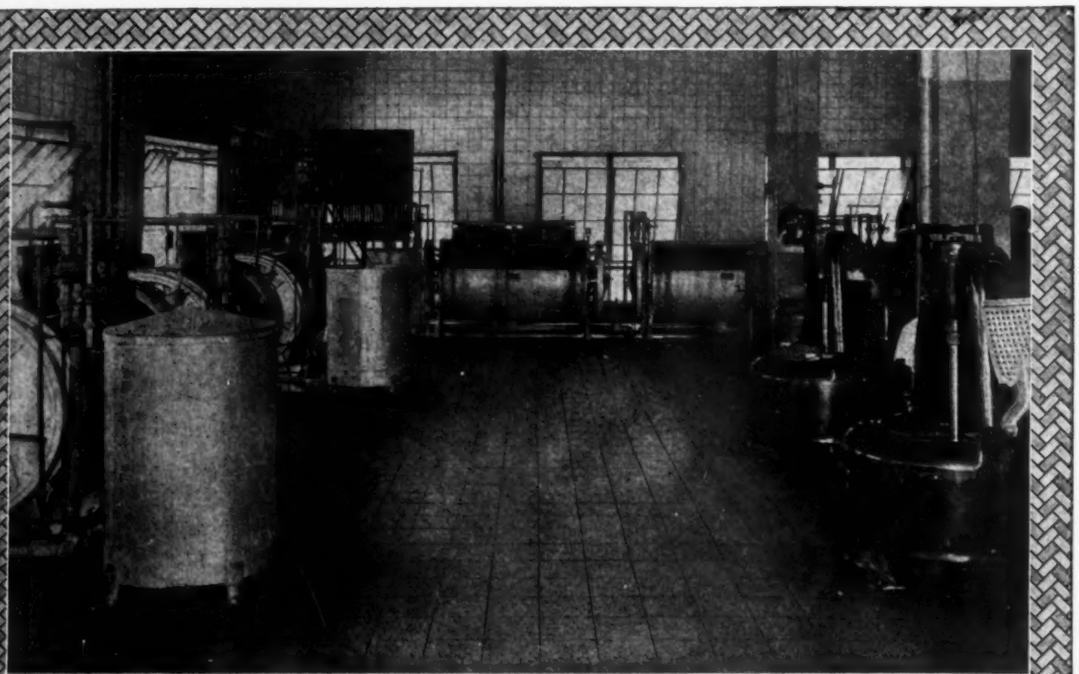
GOLD MEDAL

for Hydrotherapeutic Apparatus, were equipped with and controlled by the LEONARD VALVE.

LEONARD-ROOKE COMPANY, Providence, R. I.

If interested in industrial welfare work, investigate the LEONARD VALVE for dependable thermostatic hot water control for your Emergency Hospital.

OUR EXPERTS ARE AVAILABLE AND AT YOUR SERVICE



TILE FOR THE LAUNDRY

Tile occupies a prominent place among the vital sanitary features of the modern laundry. It renders walls and floors non-absorbent and germproof.

Tile is not affected by steam, soap-suds, bleaches or compounds of corroding tendencies.

In addition, Tile is *fireproof*, assures good light, and always remains good-looking.

The price is reasonable, and the value certain.

A FREE BOOK

on "Hospital Floors and Walls" will be sent to hospital officials upon request

THE ASSOCIATED TILE MANUFACTURERS

BEAVER FALLS, PA.

INFANT FEEDING

In extreme emaciation, which is a characteristic symptom of conditions commonly known as

Malnutrition-Marasmus-Atrophy

it is difficult to give fat in sufficient amounts to satisfy the nutritive needs; therefore, it is necessary to meet this emergency by substituting some other energy-giving food element. Carbohydrates in the form of maltose and dextrins in the proportion that is found in

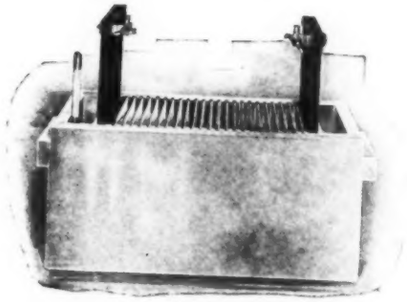
MELLIN'S FOOD

are especially adapted to the requirements, for such carbohydrates are readily assimilated and at once furnish heat and energy so greatly needed by these poorly nourished infants.

The method of preparing the diet and suggestions for meeting individual conditions sent to physicians upon request.

MELLIN'S FOOD COMPANY, BOSTON, MASS.

MAKE YOUR OWN DISINFECTANT and DEODORANT



With this Electrolytic Cell, a direct current of electricity, and salt brine, you can make a Sodium Hypochlorite which is one of the most efficacious disinfectants and deodorants known. Hundreds in daily operation.

Write for special bulletin on the subject

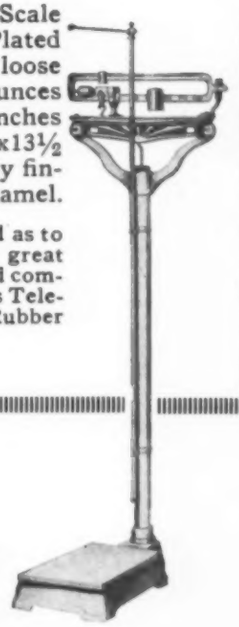
The Electro Chemical Company
Dayton, Ohio, U. S. A.

BATH SCALES

for Hospitals and Sanitariums

The De Luxe Hospital Scale is equipped with Nickel-Plated Compound Beam without loose weights; is graduated by ounces to 300 pounds; stands 58 inches high; has platform 11½x13½ inches; and is attractively finished in Snow White Enamel.

Each scale is carefully tested as to accuracy and is made for great length of service. Furnished complete with Nickel-Plated Brass Telescope Measuring Rod and Rubber Platform Mat.



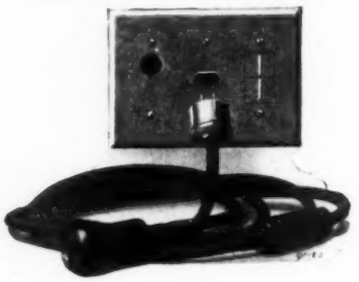
Your Hospital Supply House or we will gladly furnish further particulars and prices

MASON, DAVIS & CO.
7742 South Chicago Avenue
Grand Crossing CHICAGO

Our advertisement in the January, 1916, issue of "The Modern Hospital" gave a list of institutions in which

BRYANT
SUPERIOR WIRING DEVICES

Silent Call Signal System



had been installed up to that date. The following installations have been sold during 1916. This list includes representative hospitals in every part of the United States. Does not our continued success demonstrate that hospital authorities have learned that the Bryant System is the one they must have for reliable and economical operation?

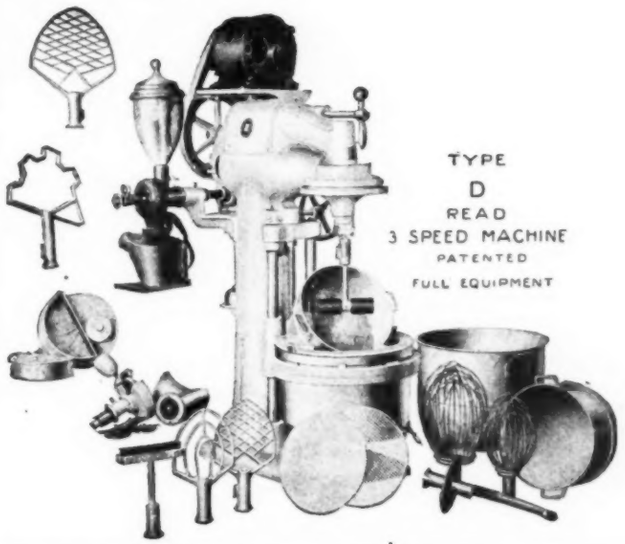
ALABAMA		
Selma	Dr. Goldsby King Private Sanatorium	30 Stations
ALASKA		
Anchorage	U. S. Government Hospital	18 Stations
CALIFORNIA		
Hanford	Sacred Heart Hospital	14 Stations
Los Angeles	French Hospital	24 Stations
San Francisco	Emergency Hospital	17 Stations
	Union Iron Works Hospital	22 Stations
	East Wing of the City and County Hospital	260 Stations
	U. S. Letterman Hospital (Addition)	18 Stations
CONNECTICUT		
Bridgeport	Galen Hospital	19 Stations
Sharon	Sharon Hospital	8 Stations
Torrington	Torrington Hospital	34 Stations
ILLINOIS		
Mattoon	Methodist Memorial Hospital	56 Stations
Rockford	Rockford Tuberculosis Sanitarium	14 Stations
IOWA		
Cherokee	Sioux Valley Hospital	27 Stations
KANSAS		
Hays	St. Anthony's Hospital	39 Stations
Little River	Hoffman Memorial Hospital	15 Stations
Neodesha	Wilson County Hospital	18 Stations
LOUISIANA		
New Orleans	Flint Goodrich Hospital	24 Stations
MANITOBA, CANADA		
Ninette	Ninette Sanatorium	26 Stations
MASSACHUSETTS		
Boston	New England Hospital for Women and Children	23 Stations
	Boston City Hospital (West Dept. Scarlet Fever Ward)	38 Stations
	Boston City Hospital (West Dept.)	59 Stations
Boston (Mattapan)	Boston Consumptive Hospital—Ward C	34 Stations
MICHIGAN		
Flint	Hurley Hospital—Isolation Ward	12 Stations
MINNESOTA		
Duluth	Morgan Park Hospital	24 Stations
Rochester	Colonial Hotel and Hospital	232 Stations
MONTANA		
Great Falls	Montana Deaconess Hospital	59 Stations
MISSOURI		
Kansas City	St. Joseph's Hospital	399 Stations
Webb City	Jasper County Tuberculosis Hospital	37 Stations
NEBRASKA		
Omaha	University of Nebraska	61 Stations
NEW MEXICO		
Tyrone	T. S. Parker Hospital	36 Stations
NEW YORK		
Binghamton	Maternity Hospital	15 Stations
Brooklyn	Norwegian Deaconess' Home	35 Stations
	Brooklyn Hospital	159 Stations
	Brooklyn Hospital (Addition)	5 Stations
	Brooklyn Hospital (Low Maternity Addition)	16 Stations
NEW YORK—Continued		
Buffalo	Buffalo City Hospital	269 Stations
Hudson	State Training School for Girls (2d Inst.)	52 Stations
	State Training School for Girls (3d Inst.)	8 Stations
New York City	Women's Hospital	10 Stations
Syracuse	Homeopathic Hospital	23 Stations
Watertown	Jefferson County Tuberculosis Hospital	18 Stations
NORTH CAROLINA		
Badin	Tallassee Power Hospital of the Aluminum Company of America	22 Stations
Wilmington	James Walker Memorial Hospital (Sprunt Bldg.)	26 Stations
Tarboro	Edgecomb General Hospital	28 Stations
NORTH DAKOTA		
Bismarck	The Bismarck	30 Stations
Fargo	St. John's Hospital	14 Stations
OHIO		
Alliance	Alliance City Hospital	42 Stations
Bellevue	Harkness Hospital	21 Stations
Cleveland	New Mt. Sinai Hospital	83 Stations
Norwalk	Norwalk Hospital	20 Stations
OKLAHOMA		
Blackwell	Southwestern Osteopathic Sanitarium	10 Stations
	Blackwell Hospital	2 Stations
Oklahoma City	Baptist Hospital	10 Stations
Sand Springs	Chas. Page Hospital	38 Stations
ONTARIO, CANADA		
Hamilton	Hamilton General Hospital (Jubilee Wing)	23 Stations
	Mount Hamilton Hospital	96 Stations
	Hamilton Health Association (Infirmary Bldg.)	90 Stations
OREGON		
Portland	First National Bank	10 Stations
PANAMA CANAL ZONE		
Ancon	Ancon Hospital	101 Stations
PENNSYLVANIA		
DuBois	DuBois Hospital	69 Stations
Sayre	Robert Packer Hospital	32 Stations
SOUTH CAROLINA		
Chester	Pryor Hospital (Replacing Magdalene)	40 Stations
TENNESSEE		
Chattanooga	Newell Sanitarium	15 Stations
	Baroness Erlanger Hospital	60 Stations
TEXAS		
College Station	Agricultural and Mechanical College Hospital	69 Stations
Dallas	St. Paul's Sanitarium (2d Inst.)	84 Stations
Galveston	John Sealey Hospital	21 Stations
VIRGINIA		
Bedford City	National Elks' Home	22 Stations
Charlottesville	University of Virginia Hospital	31 Stations
WISCONSN		
Plymouth	Plymouth Hospital	24 Stations
WYOMING		
Casper	Casper Private Hospital	24 Stations
CHINA		
Changsha	Yale-in-China Hospital	70 Stations

The Bryant Electric Company **Bridgeport, Conn.**

New York **Chicago** **San Francisco**

The Read Three-Speed Mixer—

and the work it does



THE READ MIXER will handle everything in the cake and egg line without the aid of hand labor. In rub mixes it starts the ingredients and gradually works them up until the entire mass is finished.

In pie doughs it mixes the flour and grease in granulated form.

THE READ MIXER will handle bread dough batches up to 120 pounds.

For kitchen work it will strain soups, pass apple sauces, etc., whip cream, mash all sorts of vegetables. It handles mashed potatoes in a very efficient and satisfactory manner, increasing the production from 10 to 20 percent.

Different attachments, such as a coffee grinder, meat chopper, etc., may be quickly and easily attached to the machine.

Write for catalogue for further particulars and ask for list of institutions using these machines.

READ MACHINERY CO.
YORK, PA.

Instant Exit

in case of fire

is particularly essential in Hospitals, where a few seconds may mean the difference between safety and disaster. Those few seconds are always in your favor where exits are equipped with

Write for Catalog 12-L—FREE

Von Duprin

Trademark Reg. U. S. Pat. Office, No. 85021, Pat. U. S. and Canada

Self-Releasing Fire Exit Latches

Either a push or a pull releases them instantly. Absolutely dependable, highest in quality, worth their slight extra cost. They never fail. Write now for full particulars of **Von Duprin** Devices. One for every exit door. See Sweet's catalog, pages 597-601, inclusive.

VONNEGUT HARDWARE CO. **INDIANAPOLIS, IND.**
Manufacturers and Distributors

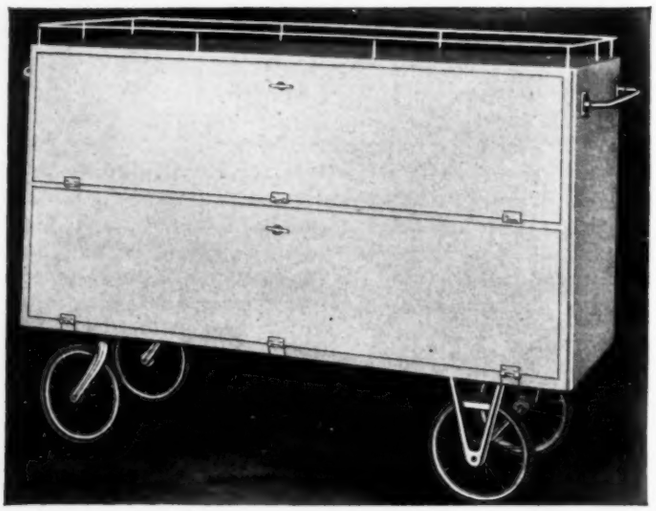
HOSPITAL DRY GOODS

Blankets
White, Grey, Plaids and Colors
Camp Blankets, Institution Blankets, Sheets and Pillow Cases
Rubber Sheeting
Maroon and White
Spreads, Quilts, Bath Mats, Bath Sheets, Towels, Table Linens
Uniform Cloths (Nurses')
Let us send you samples

SAXONIA
HOSPITAL AND INSTITUTION
SPECIALTIES
FREDERICK J. SACHS,
320 BROADWAY,
NEW YORK.

Bernstein Quality Hospital Equipment

For Thirty Years "JUST A LITTLE BIT BETTER"



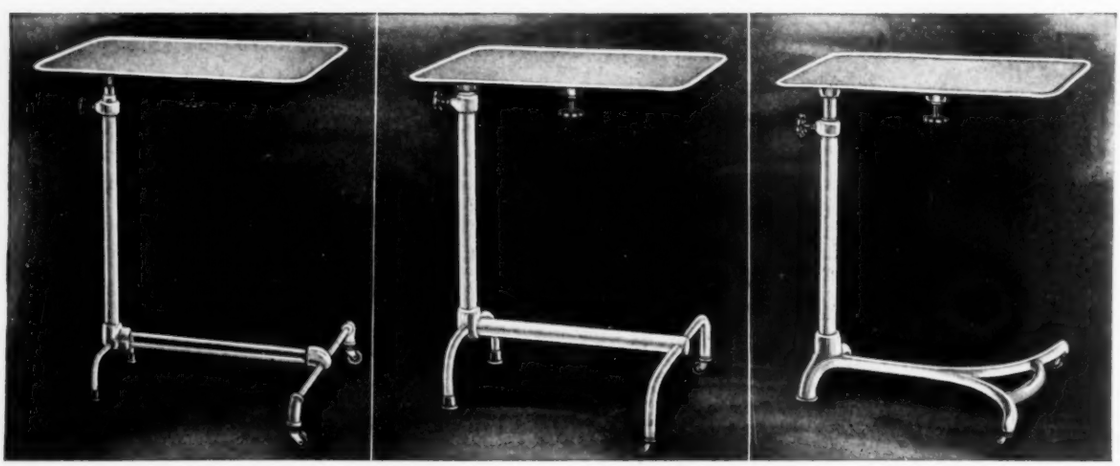
KEEPING FOOD HOT—A PROBLEM—LET US HELP YOU SOLVE IT

Bernstein No. 3110 Food Carriage

¶ Entirely inclosed in solid steel, giving it positive heat retentive qualities. ¶ Sanitary and neat—durable and strong in construction. ¶ Easily MOVED ABOUT. ¶ An ideal medium for the distribution of food in your hospital or institution.

¶ Two compartments—each with drop door. ¶ Note also the carrying surface on the top provided with guard rails. ¶ Carriage is mounted on our reenforced 12-inch wheels (one end swivel—other end stationary), having 1½-inch face rubber cushion tires. Finished throughout in aluminum bronze. ¶ We are equipped to build these carriages for special individual requirements. One of our various stock articles will, however, be found adequate for most all purposes.

The Improved Bernstein Adjustable Bedside Tables



A Characteristic Bernstein Improvement on the Old Style Adjustable Bedside Tables

¶ No turning of top. ¶ No tilting. ¶ Two oval telescoping steel tubes make the position of the top immediately above and parallel with the base—a positive position. ¶ A simple change, but a wonderfully helpful improvement to the nurse and attendant. ¶ Price is no higher, and it will save its cost in the saving of dishes and service.

Bernstein Service and Bernstein Equipment warrant your attention when buying

HIGH-GRADE ASEPTIC HOSPITAL FURNITURE BEDS AND BEDDING STERILIZERS

Bernstein MANUFACTURING COMPANY

THIRD STREET AND ALLEGHENY AVENUE PHILADELPHIA, U. S. A.

THE DE CANIO
Telescopic Support and Portable Stretcher

Is Your Hospital De Canio Equipped?

THIS method of keeping cadavers is given preference by many leading hospitals and institutions, because it represents the highest type of efficiency and is most sanitary.

It can be easily installed in any style of refrigerator. It cannot warp, bind in operation, or become foul. The portable stretcher is provided with handles, and can be easily removed for the purpose of conveying cadavers.

We specialize in Refrigerator work for Hospitals, Hotels, Clubs, Institutions, and Private Residences

Send for Booklet and Price List

LORILLARD REFRIGERATOR COMPANY

Established 1877

25 West 32nd Street NEW YORK CITY

Owing to the facilities possessed by the company to obtain clean milk throughout the year of uniform quality, the nurse can rely upon

HORLICK'S

The Original

MALTED MILK

as a protection against unsanitary milk

Horlick's Malted Milk is secure from contamination, put up in sterilized containers, is constant in composition, and makes possible the carrying-out of a progressive method of feeding that serves the best interests of the infant, invalid, and convalescent.

See that your patients get "HORLICK'S," the Original, and thus avoid substitution.

HORLICK'S MALTED MILK CO.
RACINE, WIS.

DEPENDABLE
CLINICAL APPAREL

For Surgeons, Nurses Orderlies and Patients

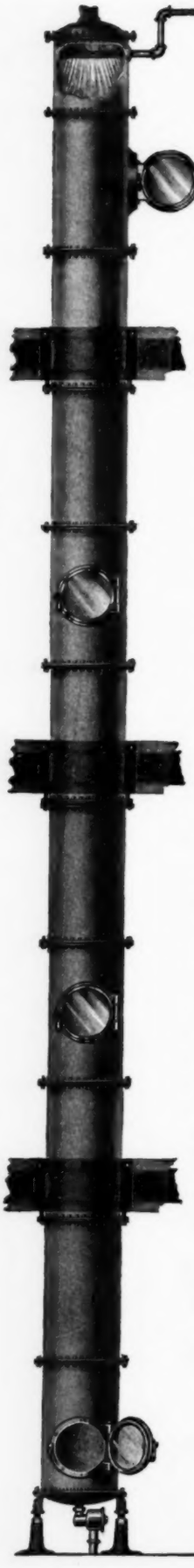
SHIELD BRAND SANITARY GARMENTS for Hospital and Sick Room use are recognized throughout the land for superior quality at the lowest manufacturer's price.

Sanitary Bed Shirts, Jackets, Trousers, Caps, Bibs, Gowns, Aprons, etc., are illustrated and fully described in our new Style Book No. 17.

Write for this complete catalogue

ANGELICA JACKET COMPANY

617 North Ninth Street ST. LOUIS, MO.



Cleansed by the turning of a valve—

A PFAUDLER

Glass Enameled Steel Laundry Chute

will *safely* and *quickly* convey your infected, soiled linen to the laundry, isolating it en route so that infection cannot communicate from one floor to another.

No need to worry about the chute—the shower of hot water from the flushing ring in the top purges its glass-lined interior of all remaining infection and foul deposit by the turning of a valve and keeps it always odorless.

The nickel and plate glass door at each floor closes hermetically, and is positively ornamental.

When once installed, your chute expense is over—no necessity for tearing out or repairs in future years, no upkeep, no power cost, no attendant to pay.

A model is installed at National Hospital Bureau, 8 West 40th Street, New York City.

May we tell you more about it?

THE PFAUDLER CO.
ROCHESTER, N. Y.

New York 110 West 40th St.
Chicago 1001 Schiller Bldg.
San Francisco 512 Sharon Bldg.

KRE-MO

STERILIZED

RICE

Can be served for at least one meal each day without the patient tiring of it.

An advantage in serving KRE-MO is on account of the endless ways of preparing this food.

Appetizing, it has all elements to strengthen and is satisfying.

Easy and quick to prepare.

Write for Samples

RICE CEREAL & MILLING CO.
Ft. Wayne, Indiana

"DELICA WHITE"

S-706-D

"Delica White" still the Leading Lighting Glassware—Always Perfect, Pure White, no Flaws. Has many imitations, but never equaled. *Write Dept. 26 for Glassware Catalogue.*

Pittsburgh Lamp, Brass and Glass Co., Pittsburgh, Pa.

Branch Show Rooms at

Pittsburgh, 200 Century Bldg.
New York, 35 W. 23d St.
Philadelphia, 816 Arch St.
Boston, 127 Federal St.
Kansas City, Mo., 309 Victor Bldg.
San Francisco, 618 Mission St.
Chicago, 17 N. Wabash Ave.
St. Louis, 614 Laclede Gas Light Bldg.
Baltimore, 122 W. Baltimore St.
London (Ont.), R. E. Davis, Representative, 113 Wortley Rd.

This Bag's Good for Two Years Service—

SPECIFICATIONS

1. *Material.* Pure red rubber is reinforced by alternate layers of long staple Gulf Coast Egyptian cotton fabric. This absolutely prevents stretching, "ballooning" or the formation of thin spots in any part of the bag, even under heavy pressure. Liquid rubber penetrates into every thread and fiber of the Egyptian cotton cloth and heavily coats both sides. The material is then thoroughly tempered and cured in live steam.
2. *Metal neck* is set in pure rubber and vulcanized there to stay forever.
3. *Patented non-losable stopper* is "always there" instead of lost when quickly needed.
4. *Capacity.* The Efficiency is a guaranteed full-capacity 2-quart bag. Most so-called 2-quart bags hold only about 1½ quarts.

THE EFFICIENCY LASTS FOUR TIMES AS LONG AS THE AVERAGE.

Built Like An Automobile Tire

THE EFFICIENCY HOT WATER BAG—built on scientific principles—is the toughest and in every sense the most efficient hot water bag ever made.

Two long years of rigid usage without the sign of any defect from faulty manufacture. That's our guaranty. It goes with each hot water bag that bears this name: "THE EFFICIENCY".

Heretofore six months' wear was the highest general average hospitals ever got.

The reason for that is clear. All other bags are made primarily for domestic use. This is in spite of the fact that strenuous hospital service wears out the same bag in six weeks that lasts two years for the average family.

THE EFFICIENCY HOT WATER BAG

is made *especially* for hospitals. *Built* to stand hard usage. *Planned* to resist abuse—carelessness of nurses—indifference of patients. It *can't* burst at the seams; nor anywhere else. *Can't* develop thin spots. *Can't* lose its shape.

☛ Read the specifications and you'll see just why.

THE EFFICIENCY Hot Water Bag is the outcome of fifteen years' experience in the hospital supply business—the result of all the opportunities we've had to keenly observe the exacting requirements demanded of this class of goods. It's the culmination of two years' continual experimentation to perfect a hot water bag that we could honestly name "THE EFFICIENCY"—durable for rigid hospital service—strong enough to come within our liberal money-back guaranty.

AND THIS IS THE BAG. IT'S ALL THAT THE NAME IMPLIES.

☛ A study of the specifications will clearly show that THE EFFICIENCY Hot Water Bag was never intended for price competition. Yet it is

Priced as Low as the Ordinary

and lasts four times as long as the average. That's a broad statement. More than that—it's our absolute guaranty.

Every buyer numbered among our 2,000 regular hospital customers knows what we stake on this guaranty. Our business is entirely with hospitals. Every transaction is made direct, and we stand behind all goods we sell.

REID BROS.

Manufacturers of Hospital Supplies of Merit

SAN FRANCISCO, CAL. 585 Mission St.

SEATTLE, WASH. 1303 Fourth Ave.

Order a dozen for trial now

$15.50 PER DOZEN

For

FUMIGATION

Use

The Permanganate
of Potash Substitute

FUMIGATO

Strongly Indorsed by

LEADING HOSPITALS and INSTITUTIONS

Indorsements, Laboratory Reports and Samples Furnished on Request

TERMS

$20.00 per gross boxes, 6 oz. each—F.O.B. Cleveland

2.00 per dozen boxes, 6 oz. each—F.O.B. Cleveland

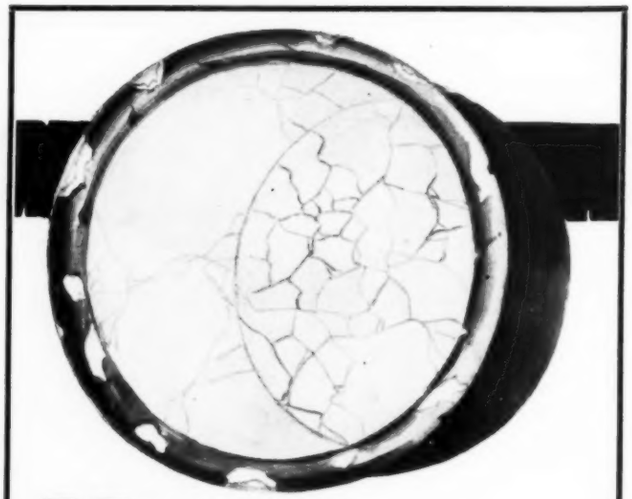
Direct or through your Jobber

The Easy Way
The Sure Way
The Safe Way
The Economical Way
Fire Danger Eliminated
Certainty of Results

To *properly* and *thoroughly* fumigate a room of 1,000 cubic feet space, one-half pound of permanganate of potash to 1 pint of liquid formaldehyde is required, and, at $2.50 to $3.00 per pound, potash is prohibitive in cost for fumigation purposes. The contents of one box of FUMIGATO, costing 14 cents per box, will liberate all the gas in 1 pint of liquid formaldehyde.

Satisfaction Guaranteed
Superior to all other methods of fumigation

THE NEALE CHEMICAL CO.
1104 Prospect Avenue
CLEVELAND, OHIO



Not! "MOCO" WARE

"MOCO" WARE *will not craze.* It is the only vitreous brown, white-lined chinaware made. It will withstand greater and harder usage and higher temperatures than any other ware on the market.

"MOCO" WARE is rich seal brown in color, and is lined with a high grade white china. It is non-absorbent, and as sanitary a ware as can be produced.

The many pretty styles and wide assortment of various pieces, the low cost, and serviceability make this the ideal cooking and serving ware for the hospital.

Our catalog shows many styles, with prices. May we send you a copy, together with a few pieces for trial purposes? Write

The Mohawk Clay Products Co.
Perrysville, Ohio

MAZDA

"Not the name of a thing, but the mark of a service"

Instead of one manufacturer's spasmodic development of his product, MAZDA Service substitutes a systematic, all-inclusive study of incandescent electric lamps for several manufacturers.

The Meaning of MAZDA

MAZDA is the trademark of a world-wide service to certain lamp manufacturers. Its purpose is to collect and select scientific and practical information concerning progress and developments in the art of incandescent lamp manufacturing and to distribute this information to the companies entitled to receive this Service. MAZDA Service is centered in the Research Laboratories of the General Electric Company at Schenectady.

The mark MAZDA can appear only on lamps which meet the standards of MAZDA Service. It is thus an assurance of quality. This trademark is the property of the General Electric Company.

RESEARCH LABORATORIES OF GENERAL ELECTRIC COMPANY

4628

SAVE TIME and TELL MORE

The superior speed, contrast and delineation of

DIAGNOSTIC X-RAY PLATES

make possible a distinct advance in X-Ray technique

Diagnostic plates are 25% faster than the fastest plates hitherto produced. It is possible to get crisp, sharp roentgenograms with a quarter-second exposure *without a screen,* passing 60 milliamperes through the tube.

Equally good for screen work

For sale by leading supply houses

AMERICAN PHOTO CHEMICAL COMPANY
ROCHESTER NEW YORK

DIAGNOSTIC

DON'T OVERLOOK THIS FACT

The institution buyer must consider final cost. The original cost of the goods he buys must be linked with their performance before final cost can be reckoned.

In the item of soda for laundry use you must consider what the soda will do, how far it will go, and what it will save.

When you buy

AMMONIA *The Double Detergent* REFINED SODA

PROSPERITY SODA Blue Label

You are buying a product that will help you to save on other laundry supplies—

You are buying a product that will shorten your washing process—

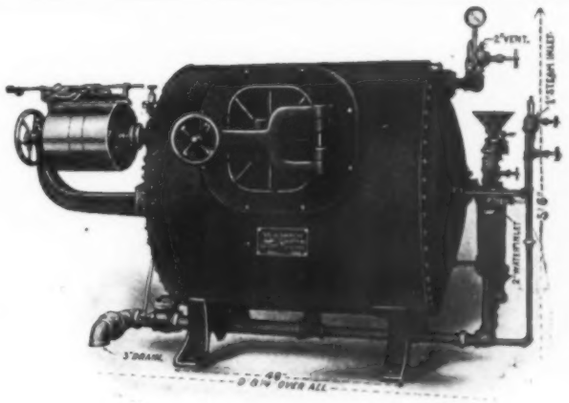
You are buying a product that saves wear and tear on your linen, and must keep it of good color.

There's ammonia in it—that's why.

WAREHOUSES EVERYWHERE

For Sample and Literature

Write "Winkler, Cincinnati"



Avoid Re-Infecting Your Washed Linen

The American Improved Sterilizer is a safeguard demanded by the professional conscience of the thorough hospital technician.

With it your linen can be handled so that all possibility of re-infection after it leaves the washing machine is eliminated.

A part of the wash room is partitioned off as a receiving room, where the infected linen is taken. Into the separating partition American Improved Sterilizer Washing Machines are built so that the receiving doors open into the receiving room. On the opposite side of the partition, in the wash room itself, are the doors by which the finished wash is removed from the machines.

Washing is begun in the usual way with cold water, so that all stains are removed and not baked in, as often happens with dry-heat sterilizers.

But the machine is built so that steam at 75 pounds pressure at a heat of 320 degrees Fahrenheit can be applied to the linens. No form of life can withstand this treatment for more than fifteen minutes.

The linens leaving the machine on the wash room side are ready for the extractor—thoroughly clean, thoroughly disinfected, and in no danger of re-infection because of the complete segregation of the wash room from the receiving room.

Should not your hospital be so equipped?

Send for our booklet, "Sterilization."

THE AMERICAN LAUNDRY MACHINERY COMPANY
CINCINNATI, OHIO

VITROLITE
"BETTER THAN MARBLE"

VITROLITE WALLS AND CEILINGS
J. C. Blair Memorial Hospital, Huntington, Pa.

VITROLITE
"Better Than Marble"

Will Properly Supplement Surgical Skill

The operating room is the center of the modern Surgeon's activity—his success depends on its character and equipment. It is vitally important that its structure be aseptic—the Surgeon's best interest demands the selection of a material that is scientifically correct.

Vitrolite is an aseptic material ideally suited to face the walls and ceilings of operating, sterilizing, and diet rooms. It has a depth of rich whiteness—is very hard—acid proof—moisture proof—unstainable, with a surface like Dresden China and as enduring as granite. Made in slabs like marble. Easy to sterilize.

Write us for a copy of "Vitrolite in the Modern Hospital"

THE VITROLITE COMPANY

Chamber of Commerce Building
CHICAGO

An Improved Germicidal Catgut to Supersede Iodized Sutures.

The first (light colored) specimen is a cross section of a strand of plain Kalmerid catgut, highly magnified.

The second (dark colored) specimen is a cross section of the same strand, reacted upon by ammonium sulphid to precipitate the mercuric element.

The uniform color throughout the section shows the thorough permeation by the Kalmerid (potassium mercuric iodid.) Such an equable distribution of the Kalmerid therefore assures a supply of this germicidal substance in the tissues until the suture is entirely absorbed.

Literature in English, Spanish, French, German, or Italian

DAVIS & GECK, INC.

SURGICAL LIGATURES AND SUTURES EXCLUSIVELY

LABORATORIES, 217-221 Duffield Street, BROOKLYN, N.Y.

San Francisco, Seattle, London *Agencies in Principal Cities*

The Perfect Cushion Heel

I. T. S.
The Heel for Nurses

CONVEX
CONCAVE

Black
Chocolate
White

CONSERVES NERVE ENERGY
GIVES COMFORT TO WEARER

Ask you Shoemaker for I. T. S. Rubber Heels
Accept No Substitute

Prices and Booklet on Application

The I. T. S. Rubber Company

ELYRIA
OHIO

Let Us Safeguard Your Patients

against the perils of fire by equipping your building with a

K-B FIRE ESCAPE

Every hospital on earth should be equipped with a K-B FIRE ESCAPE because a K-B is the safest and most dependable escape made. More efficient and more sightly than a step fire escape. Write for full details—also for prices on

WINDOW GUARDS
IRON BEDS
STEEL LOCKERS
ALL-STEEL SETTEES
AND BUILDERS' IRON
AND WIRE WORK OF ANY
DESCRIPTION

DOW WIRE AND IRON WORKS
INCORPORATED
220 BUCHANAN STREET LOUISVILLE, KY.

A Boon to Invalids

Invalids and those who do not possess the full use of their limbs need no longer be confined to their room or depend on someone to carry them up and down stairs.

Those who can use their arms can roll their own wheel chairs into a Sedgwick Automatic Brake Invalid Elevator and find great pleasure in going from floor to floor without assistance.

Where the invalid cannot himself comfortably do this, a servant or a member of the family—even a child—can safely and easily operate the elevator.

Think what a godsend this would be to your invalid patients! Why not tell them about it?

Hundreds in daily use. Built by the oldest and largest concern in America specializing in Hand-Power Elevators and Dumb-waiters.

A few hundred dollars installs a Sedgwick Invalid Elevator. Let us send you catalog and full information.

Sedgwick Machine Works

218 Liberty Street **NEW YORK CITY**

5

BED SPREADS

"RIPPLETTE"

Bed-Spreads

with the ripple woven in. They wash like a sheet, and are made in all sizes. *Reversible.*

Bates

Crochet Bed-Spreads

Well known as *Bates* "Green Ticket". All sizes and qualities.

Our Sample Book of "Bliss-Fabyan Fabrics" for Institution use, sent to purchasing agents on request

BLISS, FABYAN & CO.

Boston-New York-Chicago

Sanitary Cook's Table

Made entirely of metal. No wood to absorb grease and odors. Top is of special steel 1/8 inch thick, smoothly polished, with corners and edges slightly rounded. Shelf is heavy galvanized steel.

Made in any size up to 42 inches wide and any length.

Complete Kitchen and Serving Room Outfits

DEMMLER & SCHENCK CO.

434 Penn Avenue **PITTSBURGH, PA.**

Simmons Steel Beds are Handsomest Hospital Beds Made!

The larger tubing and simple, substantial lines of Simmons Steel Beds—*the better design*—lend an attractiveness to both hospital wards and rooms never possible with old-style spindly iron bed.

And, of course, the great improvement which Simmons has made has been the production of this *handsome tubing of larger diameter with a decrease in weight.*

This is due to Simmons use of *steel.*

Simmons Steel equals the strength-requirements of iron *three times as thick.* The weight is proportionately decreased and this lightness aided by steel-wheeled leg-mount casters makes the bed very *easy to move.*

Any style of decoration is now possible in cleanable, sanitary finishes on Simmons Steel Beds—due to the perfect surface which the improved tubing offers to Simmons-enamel.

These beds can be obtained from no other manufacturer. We invite hospital managers, physicians, nurses and others who are interested to write our Hospital Bed Department for detailed descriptions.

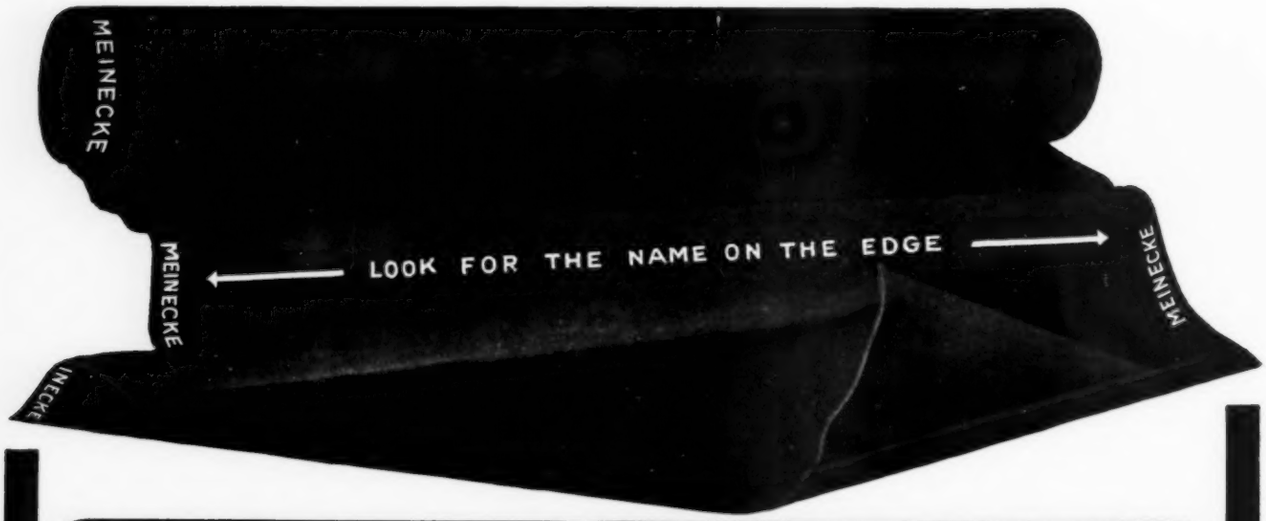
SIMMONS COMPANY

The World's Largest Makers of Metal Beds and Springs

Factories: Kenosha, Wisconsin San Francisco, Cal.

Branch Warehouses at

Chicago	New York	Buffalo	Atlanta	St. Paul
Boston	Richmond, Va.	Detroit	Indianapolis	Minneapolis
Baltimore	Cincinnati	Philadelphia	Denver	Portland, Ore.
Cleveland	Toledo	Pittsburg	Seattle	San Francisco
St. Louis				Los Angeles



MEINECKE MAROON RUBBER SHEETING

"Meinecke" Maroon Rubber Sheeting is the ORIGINAL Maroon Sheeting. ***All others are Imitations.***

Other manufacturers may imitate the color, but they cannot copy the process which gives the "Meinecke" Maroon its wonderful Urine-Resisting properties, its great Tearing Strength, and its Non-Peeling and Non-Hardening qualities.

The fact that there are so many Imitations shows that the Original must possess exceptional merit.

Our Guarantee **— We positively guarantee that the "Meinecke" Maroon Rubber Sheeting will not get hard, crack or peel off or spoil within two years from date of purchase, provided oils or oily preparations do not come in contact with it.**

Look for the name "Meinecke" on the edge. If you cannot find it, the Sheeting is not the Genuine "Meinecke" Maroon.

You Can Be the Judge

We will send to any Hospital for Trial a Two Yard Piece at Half Price —Double Coated 36 in. or 45 in. width.

Write for Samples and Prices if you require Sheeting at present.

MEINECKE & CO., NEW YORK

A Scientifically Perfect Milk Dispenser

THE Lyons Sanitary Milk Urn is the *only* milk dispenser which delivers milk as it came from the cow—and in a perfectly sanitary way.

Cream always rises to the top of milk. In the

LYONS Milk Urn

skim milk is drawn from the bottom and cream from the top by means of a tube held always in the proper position by a float. The arrangement of float and tube are such that exactly the right percentage of cream is drawn from the surface, no matter how much milk the urn contains.

There is no complicated mechanism and no mixing or agitating device.

All parts of the urn are easily and quickly removable for cleaning, including the specially constructed faucet. There are no corners or pockets to collect dirt and germs.

The urn contains a separate and removable ice chamber, and is provided with a close-fitting cover.

There is much economy in ice consumption and no waste of milk. The urn is so well insulated that *cold* milk placed in it needs no ice to keep it cold.

The Lyons Urn is made of Heavy Cold Rolled Copper, with nickel-plated, white enameled, or plain burnished finish.

All urns are heavily tinned on the inside. Stock sizes, 10, 20, 40, 60, 80, and 100 quarts.

Write for further information and prices

LYONS SANITARY URN CO., Inc.
380 East 133rd Street **NEW YORK CITY**

More sanitary utensils
More efficient baking
More appetizing food

Pyrex dishes do not absorb grease, odors nor flavors, and are not affected by acids or alkalis. They do not chip, craze nor flake. The sanitary feature, therefore, of Pyrex Ware has had a tremendous appeal in the hundreds of hospitals which have taken up its use in the last year.

PYREX TRADE MARK REG. **Transparent OVEN-WARE**
Has the name on every piece

In addition, Pyrex bakes food with unusual efficiency and with an effect most pleasing to the eye and appetite.

Use Pyrex in any oven, for all oven baking. The use of Pyrex will prove a great boon in all hospitals.

At your supply dealers.

Pyrex Sales Division, CORNING GLASS WORKS
112 Tioga Ave. **Established 1868** **Corning, N. Y., U.S.A.**

EAMES COMPANY

Successors to Eames Tricycle Company

We are now located in our new factory that is exclusively devoted to the manufacture of *Hospital Wheel Goods* and our celebrated line of *Noiseless Steel Wheels.*

We make everything for use around the hospital for moving the patient, and also anything that has to be handled, and in a quiet, easy way that appeals to the management that appreciates efficiency and good work.

The Laundry Bag Holder here shown is one of the many conveniences we make, and, if you are interested in the best line of hospital wheel goods made, a request will bring our catalogue free.

EAMES COMPANY
55 First Street **SAN FRANCISCO, CAL.**

CLASSIFIED ADVERTISING.

Under proper headings this column will present advertisements of Situations Wanted, Situations Open, Articles for Sale, etc.

When requested, replies will be received at the business office of THE MODERN HOSPITAL, Metropolitan Building, St. Louis, and will be forwarded promptly to the advertiser.

The charge for classified advertisements is 4 cents a word, with a minimum charge of $1.00, for single insertions. Orders for three or more times will be accepted at the rate of 3 cents a word, with a minimum charge of $1.00.

POSITIONS WANTED

CENTRAL REGISTRY FOR NURSES OF THE NEW YORK COUNTY Registered Nurses' Association Agency, 132 East Forty-fifth street, New York City; telephone Murray Hill 8700; Irene B. Yocom, R. N., registrar. Graduate nurses for institutional positions and for private duty. Hourly nurses.

POSITION OF SUPERINTENDENT WANTED BY REGISTERED nurse who has been in present place as superintendent of 25-bed hospital for six years and desires change; thoroughly capable executive; can have highest recommendations of present trustees. Address A. O., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

A1 SUPERINTENDENT WHO LOWERS EXPENSES AND INcreases business wishes position; pleasant, agreeable administration guaranteed; best references in all lines of the work; employed; seeking larger field; salary reasonable. Address A. B., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

REGISTERED NURSE TRAINED IN HOSPITAL MANAGEMENT, with wide experience as superintendent in general and sanatorium work, wishes position as superintendent or superintendent of nurses; nervous or mental institution preferred. Address W. C., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

SUPERINTENDENCY OF GENERAL OR PRIVATE HOSPITAL DEsired by registered nurse; nine years' experience as superintendent; thoroughly understands hospital accounting, purchasing, general management, and training nurses; at present employed as superintendent of large hospital; wishes to make change for personal reasons. Address F. L., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION DESIRED BY JANUARY 15, 1917, AS SUPERINTENDent of nurses in a 100- or 200-bed hospital, or assistant in larger institution; rigid disciplinarian; splendid teacher; good executive; none in South considered. Address R. Y. X., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

WE HAVE SEVERAL EXPERIENCED SUPERINTENDENTS and superintendents of nurses open for engagements; shall be very glad indeed to have them apply to you should you need such service. Aznoe's Central Registry for Nurses, 3544 Grand Boulevard, Chicago, Illinois.

GOOD EXECUTIVE ABILITY, GRADUATE NURSE OF A1 HOSPItal, requires superintendency of general hospital of from 50 to 100 beds; four years' experience in similar position; splendid credentials. Address L. E. W., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

ADMINISTRATOR AND SUPERINTENDENT OF HOSPITAL AND public institution, at present employed, desires to change position; has twenty years' experience in systematizing large institutions; gentlemanly and pleasing personality; middle aged; widower; highest credentials. Address Efficiency, THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

HOME ECONOMICS GRADUATE DESIRES POSITION AS DIETItian in a hospital; has had valuable large city hospital experience. Address S. A. E., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

REGISTERED NURSE OF FOURTEEN YEARS' HOSPITAL EXPErience desires position as superintendent or instructor of nurses; unusual executive ability; best credentials; up-to-date 100-bed western hospital preferred. Address R. J. M., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION AS LABORATORY ASSISTANT, OR THEORETICAL instructor in training school for nurses, desired by graduate registered nurse with experience in both lines; willing to combine the two; excellent recommendations. Address E. M. S., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

RECENT GRADUATE OF A1 MEDICAL COLLEGE, COLLEGE OF pharmacy, and academic course, with an extensive business experience, executive ability, of sterling habits, not afraid of work, desires position as superintendent, assistant superintendent, or assistant physician in a general hospital, hospital for insane, school for feeble-minded or epileptics, or educational institution; best of references. Address M. C. H., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

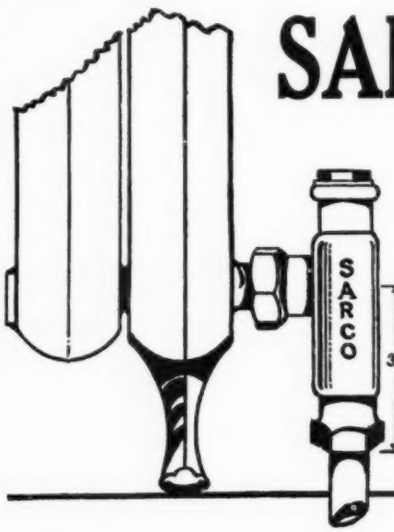
POSITION AS HOUSEKEEPER IN HOSPITAL WANTED; HAVE had three years' experience in buying and managing help; salary, $50 per month, with maintenance; good references. Address B. G. A., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

SUPERINTENDENCY AND PRINCIPAL OF TRAINING SCHOOL of medium-sized hospital is position desired by registered graduate nurse; references. Address K. M. A., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION WANTED AS SUPERINTENDENT OR ASSISTANT SUperintendent of general hospital; seven years' experience in hospital work; at present employed as business manager of 125-bed hospital; age, 32; nonmedical; expert accountant and experienced in purchasing, repairs, efficiency; best of credentials and references as to character and ability. Address Expert, THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

Continued on page 50.

Radiator Trap SARCO



For Vapor, Vacuum or Low-Pressure Heating Systems

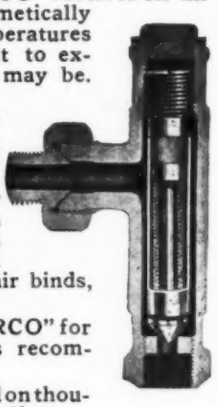
Noiseless, Efficient and Economical Heating

RADIATOR TRAPS "SARCO" render your heating system absolutely noiseless in operation—no hammering, no banging, and no noise or odor from escaping steam.

They soon pay for their installation in making your heating system a more efficient one—more heat with less coal.

These traps are different, are more satisfactory and re cheaper to install than any other trap on the market.

The RADIATOR TRAP "SARCO" receives its impelling force from an oil, hermetically sealed in a strong tube, temperatures affecting the oil and causing it to expand or contract, as the case may be. With expansion the trap is closed, preventing any steam from escaping through the trap. With contraction the trap is opened, permitting the condensed steam or water to flow out and closing just as soon as the hotter and live steam comes in contact with the oil cartridge. This trap never sticks, clogs, air binds, freezes, or leaks.



The H. P. STEAM TRAP "SARCO" for pressures up to 200 pounds is recommended for sterilizers, etc.

Used in hundreds of hospitals and on thousands of radiators and steam appliances.

Write for further particulars today

SARCO COMPANY, Inc.

MANUFACTURERS

Sarco Radiator Traps, Steam Traps, Water and Atmosphere Temperature Regulators

Woolworth Building NEW YORK CITY
and at **Monadnock Block, CHICAGO**
New Telegraph Bldg., DETROIT
Drexel Bldg., PHILADELPHIA

"If your feet are right, your mind is easy"

But, if not, mental as well as physical suffering puts a crimp in efficiency and adds "dis" to comfort.

ARMY FOOT POWDER

McK&R

Is not a mere mixture of common agents ("made to sell"), but a scientific combination of remedial and curative elements, each able to correct some physiological or pathological deviation from the normal.

Soothes, Relieves, and, when properly used, cures Aching, Burning, Tender, Itching, Sweating Feet, Bromidrosis, Fissures, Eczema, etc.

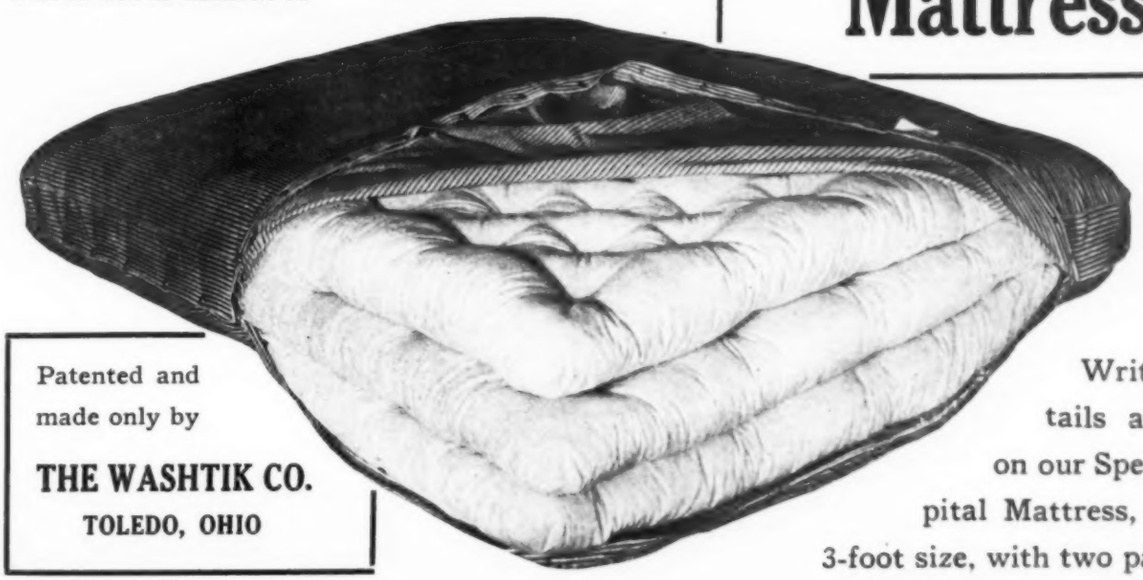
AT ALL DRUGGISTS, 25c

McKESSON & ROBBINS ESTABLISHED 1833 NEW YORK

The Cotton Mattress that can be fully Sterilized

¶ This new construction of a cotton-felt mattress not only permits of washing the tick and thoroughly airing the filling, but allows of complete sterilization. Sterilization tests, according to the most exacting standards, made at Flower Hospital, Toledo, Ohio, and St. Luke's Hospital, Cleveland, Ohio, conclusively proved that this mattress can be thoroughly sterilized, and that the sterilizing process restores the original buoyancy of the mattress as well as disinfects it.

"Washtik" EVER-NEW Mattress



Patented and made only by

THE WASHTIK CO.
TOLEDO, OHIO

Write for details and price on our Special Hospital Mattress, made in 3-foot size, with two pads only.

CLASSIFIED ADVERTISING.

Continued from page 48.

POSITIONS WANTED—Continued

POSITION AS HEAD NURSE, CHARGE OF OPERATING ROOM, OR supervisor in a small modern hospital, wanted by a graduate of large New York hospital; experienced in executive work; can teach; East preferred. Address M. K. E., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION AS SUPERINTENDENT OF MEDIUM-SIZED HOSPITAL or as assistant superintendent of large hospital wanted by an Illinois R. N.; exceptional experience; excellent credentials; at present employed. Address K. S. M., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

GRADUATE NURSE, R. N. NEW YORK, WHO HAS HAD SEVERAL years of varied experience in administrative and training school work, desires position as superintendent of hospital. Address S. Y. N. THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

MAN 45 YEARS OF AGE, WHO HAS HAD SEVEN YEARS' EXperience in one of the largest hospitals in this country, desires post as superintendent of a general hospital. Address J. J. D., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

SUPERINTENDENCY OF MEDIUM-SIZED HOSPITAL DESIRED BY graduate nurse who is an R. N., New York and Pennsylvania, for past five years has been superintendent of small hospital. Address S. H., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

DOMESTIC SCIENCE GRADUATE, WITH FIVE YEARS' HOSPITAL experienced, desires position as dietitian. Address M. B. D., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITIONS OPEN

A TECHNICIAN OR GRADUATE NURSE WHO HAS HAD LABORAtory experience is wanted by small hospital; good salary; reference sent. Address K. M. P., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

SUPERINTENDENT OF NURSES AND GENERAL HOUSEKEEPER wanted by Jewish Hospital for Consumptives, near Baltimore; 60 beds; nurse with experience preferred; apply, stating age and salary desired. Address Dr. Samuel Wolman, 2407 Madison avenue, Baltimore, Md.

INSTITUTIONAL HOUSEKEEPER, ALSO A DIETITIAN, WANTED for 100-bed hospital; salary, $40 per month and maintenance for each position; state age, experience, and inclose references and photograph. Address T. R. L., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

SURGERY SUPERVISOR WANTED FOR 110-BED HOSPITAL; SALary, $50 per month and maintenance; state age, experience, and inclose references and photograph. Address F. E. B., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

WE HAVE MANY VERY GOOD PAYING HOSPITAL positions now open, and are looking for several graduate nurses to fill them; write today for our free book—it will tell you all about our registry and the work we are doing. Aznoe's Central Registry for Nurses, 3544 Grand Boulevard, Chicago, Illinois.

GRADUATE REGISTERED NURSE FOR SUPERVISOR OF CLINIC wanted; must be experienced and have executive ability; Protestant; salary, $50 per month. Address N. O. L., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

MALE OR FEMALE ASSISTANT TO RESIDENT PATHOLOGIST, familiar with laboratory technique, wanted; person of settled habits and with definite interest in the work preferred; excellent opportunity to progress. Address Miss Mary E. Haws, Supt. 316 Colfax avenue, Scranton, Pa.

INSTRUCTOR OF NURSES WANTED IN A LARGE PRIVATE HOSpital for mental diseases; must be registered and experienced in mental nursing in addition to general hospital training; one with special preparation at Teachers' College preferred. Address W. L. B., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

REGISTERED NURSES WANTED FOR WORK IN WARDS OF A large private hospital for mental diseases; experience in mental nursing necessary in addition to general hospital training. Address W. L. B., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

MISS BAYLIE'S FIFTH AVENUE DIRECTORY FOR nurses, 8 East Thirty-Seventh street, New York, N. Y. Open day and night. Hospitals and institutions throughout the United States supplied with superintendents, assistant superintendents, operating room nurses, supervising and head nurses, dietitians, and housekeepers. Only graduates with first-class credentials from recognized training schools are considered.

SCHOOLS, SPECIAL INSTRUCTION, ETC.

INSTRUCTION IN MASSAGE, SWEDISH MOVEMENT TREATMENT, Anatomy, and Physiology. Axel C. Hallbeck. Qualified by Royal Swedish Board of Medicine, Chief of Massage Clinic St. Luke's Hospital, Hospital for Ruptured and Crippled, etc. 181 West Eighty-seventh street, New York City. Telephone Schuyler 8358. Students have the advantage of assisting extensively in clinical work; 1,250 patients treated last year.

Continued on page 52.

There are over
229 BURDETT-ROWNTREE ELECTRIC WAITER
in daily use in 109 hospitals and like institutions

Conclusive evidence of the popularity of this dumbwaiter over other and older types of hand-operated contrivances and of the superiority of this method over the tiresome, tedious task of carrying food and supplies from one floor to another.

BURDETT-ROWNTREE (PRESS-A-BUTTON) ELECTRIC DUMBWAITERS are the most efficient, the most economical, and the most durable devices of their kind. They afford a positive short cut to better service at a smaller cost.

Let us show you how they could be advantageously and inexpensively installed in your hospital or why they should be specified in the plans for that new one. Write

BURDETT-ROWNTREE MFG CO.

515 Laflin Street, CHICAGO
119 West 40th Street, NEW YORK
525 Market Street, SAN FRANCISCO
931 Security Building, LOS ANGELES

INDIVIDUAL STEW POTS
Brown or Green

FRENCH SIDE-HANDLE CASSEROLES
Brown or Green

INDIVIDUAL CASSEROLETTES
Brown or Green

HALL'S
VITRIFIED COOKING CHINA

Almost unbreakable :: Non-absorbent :: Sanitary :: Vitreous :: Leadless glaze :: Acid-proof :: Will not craze. :: :: ::

HALL'S COOKING CHINA is the ideal ware for the cooking and serving of such foods as tea, coffee, cocoa, stews, custards, souffles, vegetables, pot pies, etc. In fact, any dish that should be served warm or that cannot be satisfactorily removed from the dish in which it is cooked.

The individuality of design lends an individuality to the dish and a cheery atmosphere to the meal, and is just the service for the patient on special diet.

It will not craze from heating, nor break from handling. It will not absorb any flavor or impart a flavor to the food.

For these reasons and because of its serviceableness and durability, HALL'S VITRIFIED COOKING CHINA is the most satisfactory for the hospital, hotel, restaurant, and for the home.

A number of hospital superintendents have told us that through the use of our China for private room patients and those on special diet the prestige of their institutions had been considerably increased.

We would like to send you our catalog describing this wonderful ware. May we? Write

Hall China Company
East Liverpool, Ohio

EGG CUSTARDS

CUSTARDS

WHITE FLUTED RAMEKINS

WHITE FLUTED CUSTARDS

BOSTON TEA POTS
Brown or Green

NEW YORK COFFEE OR TEA POTS
Brown or Green

FRENCH TEA OR COFFEE POTS

CALIFORNIA HOT WATER POTS

OVAL-COVERED CASSEROLES

To us an inquiry means

a chance to help and not just a chance to sell

—an opportunity for us to help some hospital to save money in the buying of

Laundry Supplies

Our prices, through our PERIOD BUYING PLAN, are lower in many cases and on many items than those of other manufacturers and dealers. Thus an inquiry does actually enable us to help the hospital to lower prices on its Laundry Supplies.

We maintain low prices, and our reason for our being able to do so is that we ourselves are large manufacturers of many laundry supplies, and in those cases where we do not make the item are such large buyers of it that we pay much less than does the smaller dealer or jobber.

Send us a list of the different kinds and different amounts of laundry supplies you will use within the next three months, six months, or a year, and let us submit our "proof" prices to you.

As we say, an inquiry is a chance to help. Give us this opportunity of helping you. Please write today.

The Stanley Laundry Supply Co.

628 West 30th Street NEW YORK CITY

Indicated where a light stimulant and tonic is needed

COOK'S *Imperial*

Extra Dry

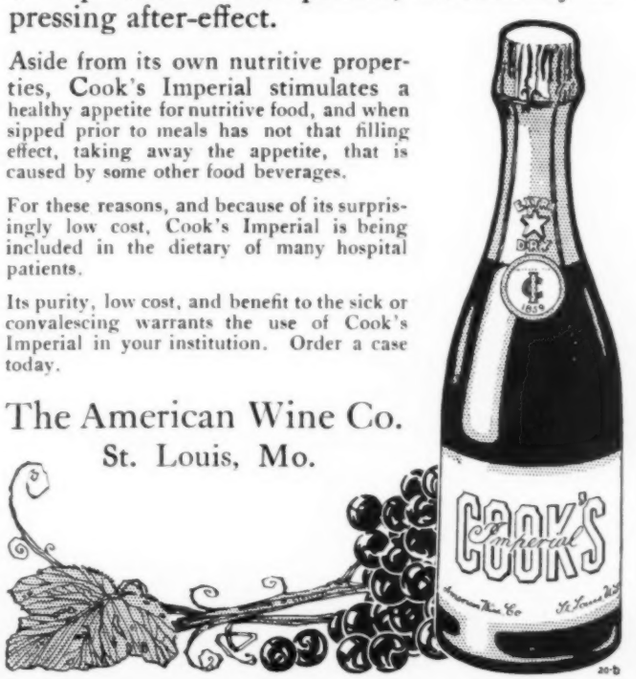
Champagne

is just stimulating enough to keep up the spirit of hopefulness in the patient, without any depressing after-effect.

Aside from its own nutritive properties, Cook's Imperial stimulates a healthy appetite for nutritive food, and when sipped prior to meals has not that filling effect, taking away the appetite, that is caused by some other food beverages.

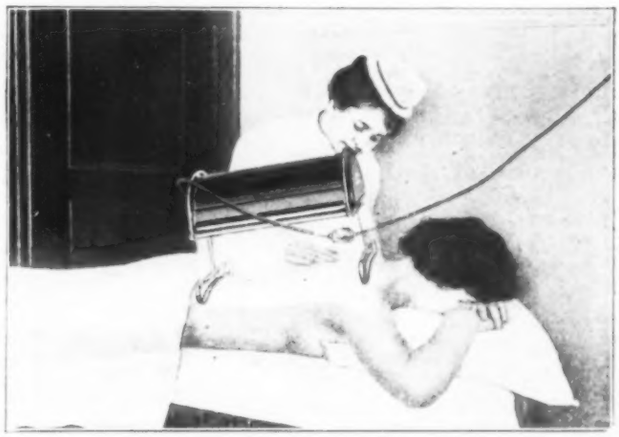
For these reasons, and because of its surprisingly low cost, Cook's Imperial is being included in the dietary of many hospital patients.

Its purity, low cost, and benefit to the sick or convalescing warrants the use of Cook's Imperial in your institution. Order a case today.



The American Wine Co.
St. Louis, Mo.

Doctor—Will You Try One?



The universal method for local application of heat

EVERY physician—specialist or general practitioner—knows the need of a practical and efficient method or device for making local applications of heat for the relief of pain, congestion, hypertensions, etc.

Such a device is the Burdick "Radio-Vitant" Applicator—the universal method for producing and applying light, hot air, and steam, with the widest range of adaptation.

For Infantile Paralysis

It is now conceded by all Schools of Medicine that light, properly applied, is one of the most effective means of combating this disease.

Futhermore, with the delicate vitality of childhood, light is the least exhausting means of obtaining active hyperemia, relieving congestion of the spinal nerve; increasing local nutrition, as a means of warding off infection and building nerve tissue; and to increase the general vital resistance of the child.

Burdick "Radio-Vitant" Applicators have been pronounced by many physicians, of all schools, the most satisfactory device known for making such applications.

Relieving a case of neuritis

Introductory Free Trial Offer

To quickly demonstrate to the profession, in their own hands, the efficiency and superiority of Burdick Equipment, we have arranged to distribute 1,000 "Radio-Vitant" Applicators of the type designed to meet the most universal requirements.

"Radio-Vitant" Applicators and Light Bath Cabinets range in prices from $30.00 to $375.00.

We will send one Universal type "Radio-Vitant" Applicator on ten days' free trial at the special introductory price of $21.50, complete. SEND NO MONEY. Just mention this ad, Doctor, and say you want to try an applicator. Then, if you don't want to keep it, send it back.

Come and See Us

You are cordially invited to visit our Chicago office and demonstration rooms at 15 East Washington Street—Telephone, Randolph 4723.

Get Our Free Book

We have prepared an interesting and valuable "Manual of Physiologic Therapeutics." Just drop us a card and we will mail you one free.

Burdick Cabinet Co.

200 Madison Avenue **Milton, Wis.**

CLASSIFIED ADVERTISING.

Continued from page 50.

SCHOOLS, SPECIAL INSTRUCTION, ETC.—Continued

NEW YORK SCHOOL OF MEDICAL GYMNASTICS AND MASSAGE offers a practical and theoretical course in Swedish Movements, Massage, Baking, Electric Vibration, etc. Diploma. Patients secured. For further information apply School of Medical Gymnastics and Massage, 664 Lexington Avenue; phone 1349 Plaza, New York City.

INSTRUCTION IN MASSAGE FOR THE TRAINED NURSE—Swedish Movements, Medical and Orthopedic Gymnasties, Electro-Therapy and Hydro-Therapy. Complete instruction in all branches of physiologic therapeutics, including double light, hot air baths, baking, vibrators, nebulizers, solar and leucodescent lamps; Bier's hyperemia method; galvanic, faradic, and static electricity; high frequency and sinusoidal currents; x-ray; Dr. Schnee's four-cell bath; Bachelet magnetic wave; Nauheim baths and Schott exercises. Medico-mechanical Zander gymnasium installed. Separate male and female classes. Diploma issued. Particulars and illustrated booklet on request. Duration of terms, four months and eight months. Prepares you for Pennsylvania State Board Examination. First section of fall class opened September 20, and second section of fall class opens November 22, 1916. The Winter class opens January 10, 1917. Pennsylvania Orthopedic Institute and School of Mechano-Therapy, 1703 Green street, Philadelphia, Pa.

A THREE-MONTHS' COURSE IN OBSTETRIC NURSING GIVEN by the Elizabeth Steel Magee Hospital of Pittsburgh, Pa. Open to graduate nurses and to pupil nurses in training in general hospitals. There is an active service, including out-patient department; 1,500 confinements a year available for teaching purposes. Weekly lectures by the medical staff and weekly classes by the directress of nurses and her assistants. Special instruction and service in the labor departments, puerperal wards, and nursery. Diploma given at the end of the course. Affiliation with training schools in good standing especially desired. Address all communications to the Directress of Nurses.

FOR SALE

HOSPITAL—TWENTY MINUTES FROM THE CENTER OF LOUISville, Ky., on interurban, 5-cent fare, cars every half hour; town 10,000; no other hospital; can get tax exemption; we are told the city will pay about $1,200 yearly for caring for city patients; especially equipped for mental cases; about 40 rooms; excellent brick and stone building; good condition; sell on easy terms or trade for farm or city property elsewhere, as owner is nonresident; or for man of character and standing might take considerable stock in company organized to operate this hospital. McAlister & Co., 126 S. 5th street, Louisville, Ky.

VACUUM CLEANERS AND WASTE PAPER BALERS; BOTH money savers and economizers; get our offer; effective cleaners to suit every need, portable or stationary. The Clifton-Pratt Company, Cincinnati, Ohio.

NEW HOSPITAL FOR SALE IN PROSPEROUS SOUTHERN CALIfornia town, near Los Angeles; capacity, 35 patients; very complete new building, never occupied; great bargain and favorable terms to right party. Address Fullerton General Hospital, 633 I. N. Van Nuys Building, Los Angeles, Cal.

FOR SALE OR LEASE, A PRIVATE SANITARIUM OF 25 BEDS that has been in successful operation for eight years; located in one of the best towns in the Southwest; equipment modern and complete in every particular; good opportunity for one or two experienced nurses to make it a paying proposition. Address A. C. J., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

MISCELLANEOUS

SEELY FIRELESS COOKERS ARE DESIGNED FOR hospitals. Testimonials from high-grade hospitals throughout the country. Write for full information to the Frances A. Seely Company, 5735 Harper avenue, Chicago, Ill.

IS YOUR X-RAY WORK SATISFACTORY? UNLESS YOUR DEpartment is making as fine X-Ray plates as any you ever saw shown, you are not getting full value from your apparatus; we can teach you or your nurses how to make radiographs of highest quality; your doctors can easily interpret a fine radiograph, but a poor one is dangerous both to the patient and the hospital's reputation; ask for "Paragon X-Ray Pointers"—free. George W. Brady & Co., 760 S. Western avenue, Chicago, Ill.

TO MEDICAL WRITERS

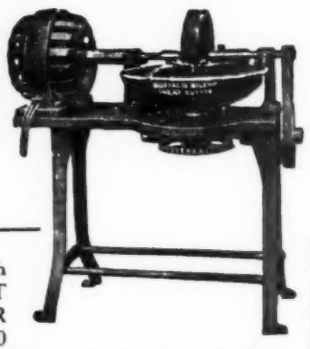
THE NURSE PUBLISHING COMPANY PURCHASES ARTICLES ON general nursing technic, nursing in special diseases, and allied subjects of interest to nurses for publication in THE NURSE, a monthly journal of scientific and practical nursing methods; photographic originals for engraving purposes can be used; a specimen copy will be sent on request, with suggested subjects, rate of payment, etc. Address Editor THE NURSE, Jamestown, N. Y.

IT IS IMPORTANT THAT YOUR HOSPITAL RECORDS SHOULD be carefully preserved, and they should be in a convenient form for reference. We have the standard file for hospital records, and can quote you on charts, records, and binders. Let us send you a binder on approval, which may be returned if not suited to your requirements. Hospital Standard Publishing Company, 31 South Howard street, Baltimore, Md.

GUINEA PIGS FOR EXPERIMENTAL OR BREEDING PURPOSES, quality guaranteed. Largest supply in America assures prompt shipment. Prices reasonable, quoted on request. Cavies Distributing Company, 600 West Seventy-fourth street, Kansas City, Mo.

Continued on page 54

What a Buffalo Meat, Food and Vegetable Chopper will do



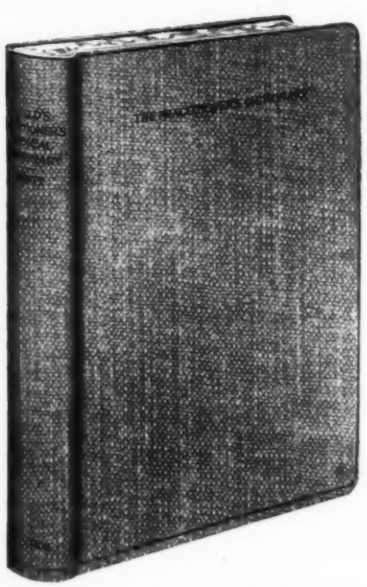
It will cut as much SAUSAGE MEAT or HAMBURGER STEAK in 10 minutes as is possible to do by hand in half an hour—as much COOKED MEAT, HASH, ETC., in 10 minutes as a hand chopper would take an hour to chop—as much VEGETABLE FOR SOUP in 5 minutes as would take two and one-half hours—CHICKEN and TURKEY for croquettes, FRUITS, VEGETABLES and FOODS for salads, CRACKERS, BREAD or MINCE MEAT for puddings, CABBAGE, etc., in as little time proportionately.

Because of its food and labor-saving qualities, and its more satisfactory and economical operation over other methods, the Buffalo Food Chopper should be installed in every Hospital Kitchen.

Let us send you further particulars and prices. Write

John E. Smith's Sons Co., Buffalo, N. Y.

GOULD'S PRACTITIONER'S MEDICAL DICTIONARY

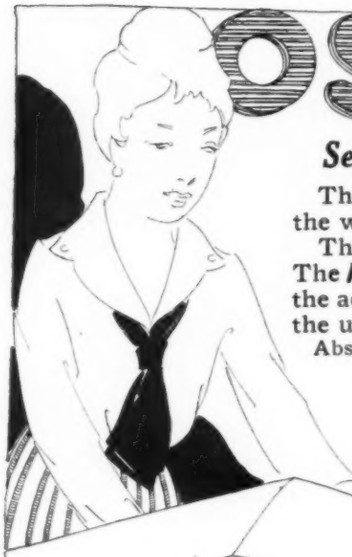


Handsome flexible cloth, marbled edges, round corners, 962 pages. Weight only 2¼ lbs. **$2.75**

Thumb Indexed, $3.25 Leather, $4.00 and $4.50

P. BLAKISTON'S SON & CO., Philadelphia

Publishers



OSTERMOOR

Sets Highest Standards of Comfort—Cleanliness—Economy

These are the three chief reasons why the Ostermoor Mattress is used in the world's leading hospitals.

There is still another reason: Ostermoor Mattresses are "built—not stuffed." The ***hand-laid*** sheeted Ostermoor filling will not shift, mat, or pack. It gives the acme of sleep-inducing comfort! And no matter how hard or constant the use, an Ostermoor will ***not*** lose its shape!

Absolutely guaranteed to be dust-proof, vermin-proof, water-proof, and practically germ-proof.

The first cost of an Ostermoor is much less than for a hair mattress. Its first cost is the ***last*** cost—no need to repair or remake an Ostermoor. We will gladly send our Catalog of Institution Bedsteads and our comprehensive book—"Test of Time"—giving fullest details of the service we offer hospitals.

ANOTHER FAMOUS PRODUCT

OSTERMOOR SANITARY SHEETING

Far better than rubber sheeting, yet contains no rubber. Its odorless and waterproof qualities, combined with its real economy, place it at the head of hospital sanitary sheeting. Easily washed in boiling water. *Write for particulars and prices.*

OSTERMOOR & CO.
275 Elizabeth Street New York
Canadian Agents: The Parkhill Mfg. Co., Ltd., Montreal

No. 404.

DAVOL
QUALITY SERVICE

RUBBER GOODS FOR HOSPITALS

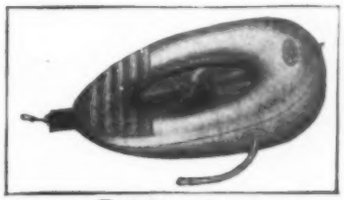
No. 2

IMPROVED BED PAN

Made of fine Chocolate Cloth-inserted Stock especially constructed for comfort and service.

When in use, the spine rests on a soft inflated cushion and is not raised from the bed as on the ordinary Rubber Bed Pans. Excellent for douche purposes, as the construction allows for good-sized opening and good capacity. Price . . . . . each, $6.50

Subject to usual discount



Bed Pan No. 19

DAVOL RUBBER COMPANY

Established 1874 PROVIDNCE, R. I., U. S. A. *Everything in Fine Rubber*

CLASSIFIED ADVERTISING.

Continued from page 52.

MISCELLANEOUS—Continued

ONE OF THE CONSTANT NEEDS OF EVERY HOSPITAL AND allied institution is a satisfactory and safe fumigant. If you are not familiar with the advantages of Fumigato, which is guaranteed to give entire satisfaction, write us for information. The Neale Chemical Company, 1104 Prospect avenue, Cleveland, Ohio.

GENERAL SERVICE—PHYSICIANS, SURGEONS, AND NURSES furnished for hospital or assistants. Permanent positions for nurses, any kind of work in any state or Canada. Practices of physicians, surgeons, dentists, and also veterinarians handled and furnished in all the states. Drug stores for sale. Positions furnished in all states, whether hospital, doctor, nurse, dentist, druggist. Write me your wants. F. V. Kneist, Omaha, Neb.

ECONOMIZE THE ICE BILL FOR YOUR INSTITUTION BY USING the Reinhold ice chopper or shaver. Its installation means greater efficiency as well as economy in ice and labor. The original cost is small—you cannot afford to be without it. Write for prices and discount after looking up the illustration of our device on page 79 of this issue. The Reinhold Manufacturing Company, 133-39 Beaubein street, Detroit, Mich.

RAPIDLY INCREASING BUSINESS ON KYANIZE VARNISHES and enamels has necessitated increased facilities for manufacturing. We have forty men now working on a new four-story brick factory building with latest up-to-date features throughout; also another brick building is being erected for our office and advertising departments. We shall thus be enabled to double our output during the coming season. Boston Varnish Company, Everett Station, Boston, Mass.

A TRIAL QUANTITY OF WHEATENA (AN ALL-WHEAT FOOD) will be gladly furnished to hospital superintendents and dietitians on request. See our offer on page 41 of this journal. The Wheatena Company, Wheatenaville, Rahway, N. J.

MAKE YOUR OWN DISINFECTANT AND DEODORANT. WITH our electrolytic cell, a direct current of electricity, and salt brine, you can make a sodium hypochlorite which is one of the most efficacious disinfectants and deodorants known. Write for our special bulletin on the subject. The Electro Chemical Company, Dayton, Ohio.

A GOOD MEDICINAL WHISKY IS ONE OF THE SUPPLIES YOUR institution should always have in stock. Cascade Whisky is especially prepared for medicinal purposes, and, in order that you may compare its quality with that of the ordinary commercial brands, we will gladly send you three bottles to test. See our offer on page 86 of this journal, and write us at once. George A. Dickel & Co., Nashville, Tenn.

EDMANDS ELECTRIC BAKER FOR THE APPLICATION OF radiant heat is adjustable, made in various sizes for the treatment of any part or the whole of the body; heat instantly controlled and regulated; no danger from fire or explosion, or overheating adjacent parts to that being treated. Special apparatus made to order. Write for particulars. Walter S. Edmands, 134 Congress street, Boston, Mass.

CAMPHENOL—A MODERN ANTISEPTIC. ALTHOUGH POWERful and energetic as a germicide, Camphenol is not dangerous; it is not corrosive, and will not destroy clothing, fabric, or furniture. It has many clinical uses—scarlet fever, throat gargle, puerperal septic conditions, cellulitis, wound dressing, fevers in contagious diseases, etc., as well as a general disinfectant and deodorant about the sick room and hospital. A sample phial will be sent on request. Johnson & Johnson, New Brunswick, N. J.

KORA-KONIA AS A BED-SORE PREVENTIVE. KORA-KONIA dusting powder, introduced by Mennen, has the Mennen reputation behind it. It has the indorsement of thousands of physicians who have tried and are using this special dusting powder. Send for samples, so that you, your staff, and nurses can give it a trial. The House of Mennen, Newark, N. J.

A PERMUTIT PLANT WILL REMOVE ALL THE HARDNESS from any water all the time, year after year. The dependability of Permutit has been proved by the acid test of service in America and abroad. If you are not using Permutit, or if you are attempting by other means to accomplish what Permutit alone can accomplish, you are neglecting an economy with which your institution might be profiting. Ask for a Permutit demonstration. The Permutit Company, 30 East 42d street, New York City.

TONGUE DEPRESSORS, APPLICATORS, AND SPLINTS OF THE "Perfection" brand, which means that they will prove absolutely satisfactory, are described in our announcement on page 88 of this journal. Samples for your inspection will be sent on request. Perfection Manufacturing Company, Detroit, Mich.

"WASHTIK" EVER-NEW MATTRESS IS SO CONSTRUCTED THAT it not only permits of washing the tick and thoroughly airing the filling, but allows of complete sterilization. See illustration and particulars in our announcement in this issue, and let us send you details and price on our special hospital mattress, made in 3-foot size, with only two pads.

IF YOU HAVE NOT TRIED JIFFY-JELL GELATINE DESSERT, you have a treat in store. The fruit juice flavors, furnished in vials, which are mixed with the gelatine when partly cooled, retain their fresh and natural taste because they are not scalded when the gelatine is prepared. One package makes from six to eight dishes, and seven fruit flavors are available. See our announcement on page 39 of this issue, and write to us for samples. Waukesha Pure Food Company, Waukesha, Wis.

THE JOHN VAN STEEL RANGE IS BUILT IN THE WIDEST range of styles to satisfactorily fill the widest range of requirements—there is a John Van Steel Range for every purpose. We make a specialty of hospital kitchen equipment. Let us send you our catalogue showing our complete line. The John Van Range Company, Cincinnati, Ohio.

Continued on page 56

BLAKESLEE CONCRETE

Potato and Vegetable Peeler

Saves twenty percent on potatoes. Reduces labor one-half. Simply and durably constructed. Nothing in peeling cylinder to rust and discolor the vegetables. Takes only small floor space.

Write for particulars today

G. S. BLAKESLEE & CO.

Dish Washing Machines and Kitchen Specialties

CHICAGO NEW YORK SARNIA, ONT.

Hospital and Institutional Record and Account Books

Patients' Ledger
A new book which simplifies the keeping of patients' accounts, eliminates the possibility of errors and is an instant reference to your Accounts Receivable. Price, $10.00.

Patients' Register
Designed by Mr. J. R. Coddington. Provides for a complete history and record of the admittance and discharge. Three Sizes—$5.00, $7.50 and $10.00.

Hospital Cash Book
A simplified cash account book for the use of small hospitals and institutions. Bound in Buckram—$1.25.

Linen Record Book
Very useful in preventing loss and wasting of linens. Bound in Buckram—$1.25.

Training School Record
A complete record, showing the individual work of each nurse, and adapted to either the two or three-year course. Bound in Buckram—$1.50.

(Any of above books will be sent prepaid if remittance accompanies order.)

Sample sheets upon request

The Burkhardt Company, Inc.

87 West Congress St. DETROIT, MICH.

Clean, Cheerful, and SANITARY

Always!

Hot water and uric acid will not mar the snow-white cleanliness of this

"NEVER SPLIT"
CLOSET SEAT

Rough usage and slamming will not cause the seat to crack, split, or open at the joints.

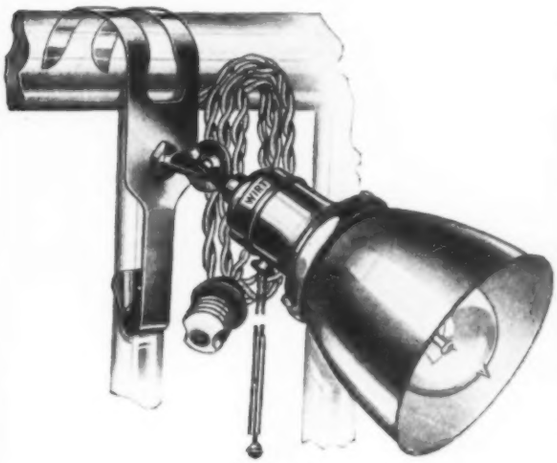
The steel-bolted joints keep it entirely intact, allowing no possible chance for germs to lodge and multiply.

Every seat is accompanied by a definite five-year guarantee of satisfactory service, too.

Write for a miniature construction Model M. H.—It's free

NEVER SPLIT SEAT CO.
EVANSVILLE, IND., U.S.A.

OPERATE NOW
On Your Electric Lights! Take Out the Glare



No. 44

DIM-A-LITE PORTABLE

The Right Light at the Right Spot Easy on the Eyes and Nerves

Dim-a-lite Portable takes all the glare out of electric light, eliminating entirely and absolutely the heretofore one great inconvenience, especially from hospital standpoint. No more all light or total darkness.

A silent pull of the chain gives five degrees of light—full, half, dim, nite-lite and out. Just the degree of light necessary to suit the eyes and nerves of every patient. Puts the right kind of a light right at the right spot.

Easily attached to the head of any bed, it gives every true comfort of electric light; plenty of light for those convalescent, a soft dim glow for those seriously ill. Furnished with cord and attachment plug only.

Write for Bulletin H. M.

WIRT COMPANY
Philadelphia, Pennsylvania

CLASSIFIED ADVERTISING.

Continued from page 54.

MISCELLANEOUS—Continued

TEST YOUR STERILIZATION FREQUENTLY—THE BEST APPARATUS and routine fail at unexpected times. The Sterilizer Control is the simplest and most exact scientific test there is. Get a box of Sterilizer Controls and have them convenient for quick tests. 100 for $5.00. A. W. Diack, 47 Larned street, Detroit, Mich.

THE DIETITIAN IN YOUR INSTITUTION WILL BE ASSISTED IN her important work through a knowledge of the food value of Brosia Meals. A book of Brosia receipts for soups, breakfasts, and luncheon dishes, muffins and breads, with particular reference to the requirements of hospitals, will be gladly sent on receipt of your request. Calumet Tea and Coffee Company, 409-411 West Huron street, Chicago.

DIPLOMAS—ONE OR A THOUSAND. ILLUSTRATED CIRCULAR mailed on request. Ames & Rollinson, 203 Broadway, New York City.

THERE ARE MANY QUALITIES OF SAFETY PINS, BUT STEWart's Duplex is the one that is sure to stand the test. Prices are reasonable, and free sample will be gladly sent. Consolidated Safety Pin Company, Bloomfield, N. J.

WIRE GLASS FIRE PROTECTION—IF THE WINDOWS OF YOUR hospital are not equipped with wire glass, you are not giving your patients sufficient protection from fire. Wire glass is recognized as a most important and necessary fire retardant. Samples and all information will be sent on request. Mississippi Wire Glass Company, 223 Fifth avenue, New York city.

SANITARY APPLIANCES AND HYDROTHERAPEUTIC EQUIPment—We manufacture not only a general line of hospital sanitary appliances, but also a number of hospital specialties that will insure cleanliness and prevent infection. Our hydrotherapeutic equipment is of a character that will appeal to the management of any hospital as being practical and efficient. Write for a catalogue illustrating our specialties for hospitals. The J. L. Mott Iron Works, Fifth avenue and 17th street, New York city.

INSTANT ELECTRIC STEAM STERILIZATION BY THE PENTZ System. See illustration on page 90 of this journal and write us for detailed information. The Santiseptic Manufacturing Company, Tompkinsville, S. I., N. Y.

YOU OWE IT TO YOURSELF AND YOUR PATIENTS TO HAVE your institution adequately lighted—there should be a good light everywhere. With Westinghouse Mazda Lamps the operating cost of an adequate lighting system would be no higher than that of an inefficient installation. See our announcement on page 77 of this journal and write for full information concerning Mazda Lamp Service. Westinghouse Lamp Company.

GROUND GLASS SYRINGES

LÜER TYPE

Are more desirable than the metal or glass with asbestos-wrapped plunger hypodermic syringes, *yet our perfectly ground glass syringes cost you no more.*

1½	cc.....	$ 4.85	per doz.
2	cc.....	5.85	" "
5	cc.....	8.50	" "
10	cc.....	14.50	" "
20	cc.....	16.50	" "

Orders filled promptly.

Metropolitan Hospital Supply Co.
220 Fourth Ave. New York, N. Y.

PACIFIC COAST OFFICE — 24 California St., SAN FRANCISCO, CAL.

We make a specialty of furnishing

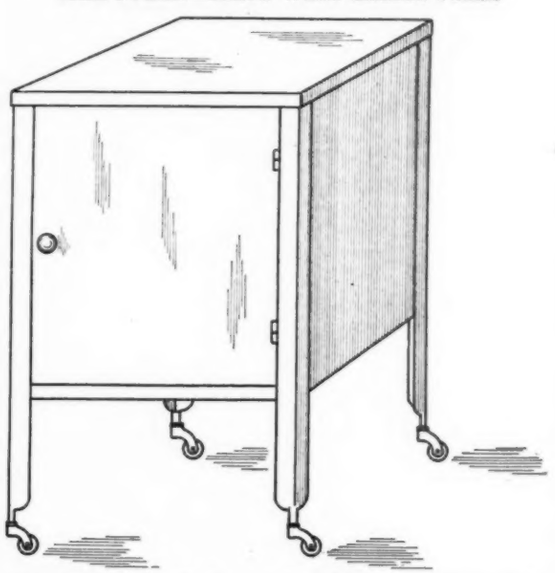
Alcohol Free of Tax
FOR HOSPITAL USE

Full particulars and quotations on application.

We also carry in stock a full line of ***Drugs*** and ***Chemicals*** on which we shall gladly furnish quotations.

EASTERN DRUG COMPANY
14 Fulton Street BOSTON

Hospital Chairs and Tables
ALL STEEL—Baked White Enamel Finish



Our Hospital Chairs and Tables are germproof and sanitary in construction

Send for catalog and prices

THE CHICAGO WIRE CHAIR CO.
Manufacturers
620 North La Salle Street CHICAGO, ILLINOIS

WILLIAMSON Laundry Dryer

Really DRY Laundry in Record Time

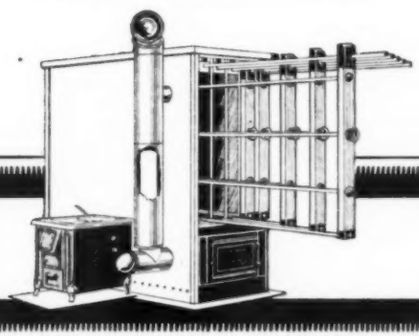
That's the story of the WILLIAMSON Way to real laundry efficiency.

Saves employees' time, too, and does away with "bad weather" uncertainty. Costs practically nothing extra to operate, because the same fire that boils the clothes and heats the irons also dries the laundry.

This Free Book Tells How

A postal brings illustrated catalog. Tell us your needs—the WILLIAMSON is made in all sizes, and dries with coal, wood, gas, steam, or hot water. Write now.

THE WILLIAMSON HEATER CO.
1031 Fifth Ave., Cincinnati, Ohio



No. 1BV Fearless Dishwasher equipped with tables and a scrap block—admirably adapted to limited floor space.

FEARLESS DISHWASHERS

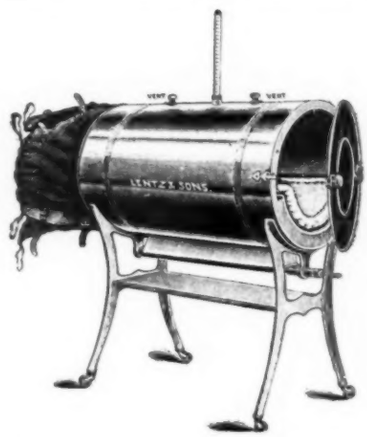
Eliminate Breakage—Insure Clean Dishes. Fearless baskets separate the cups from the other dishes, making them easy to pack and preventing breakage and nickage.

Our dishwashers reduce dishwashing expense away below that of other dishwashing machines. Made to suit space of any size and shape—with or without tables—with round corners on rims—easy to clean and work around—power, hand or electric—simple in construction, compact and efficient. ¶Perfect Sterilizing is assured by the dishes being in water 180 to 212 degrees.

OUR ILLUSTRATED CATALOG shows our complete line of hand and electric power dishwashers. We send it FREE. Write for your copy today.

Fearless Dishwasher Co., Inc. **In Business 15 Years**

Factory and Main Office at **236 Colvin Street, Rochester, N. Y.**
Branch Office—New York and San Francisco



Rheumatism, Gout, Synovitis

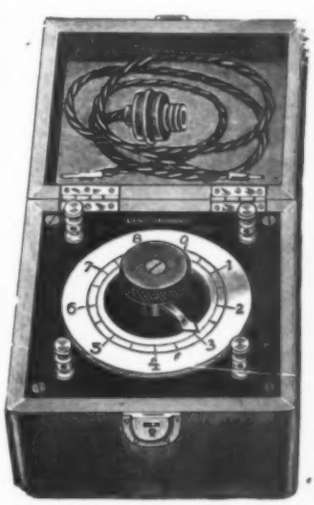
Fibrous Ankylosis, Traumatic Arthritis, Sprains, Dislocations, Fractures, etc., are treated with marvelous success with the

FRAZIER-LENTZ HOT-AIR APPARATUS

THOROUGHLY WELL MADE AND SCIENTIFICALLY CONSTRUCTED

HOSPITAL AND SURGEON'S CAUTERY

For Electric Current



The most satisfactory and indispensable apparatus ever devised for cauterizing, especially for the general surgeon. Used in more than 700 hospitals.

Absolutely "fool-proof." Does away with the use of Benzine. A working addition to the Operating Room with little expense.

Heavy Cautery Knife especially devised for all incising and general use. An important instrument for cauterizing flat surfaces to prevent hemorrhage. Cautery knives are aseptic, with mineral handles, and can be boiled indefinitely without injury.

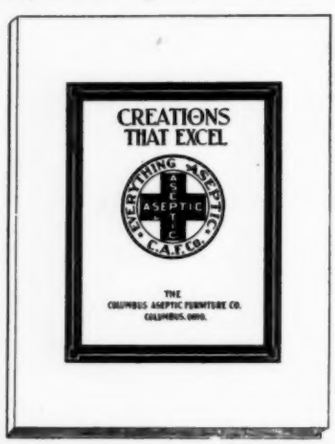
Send for descriptive circulars and prices of both these apparatus

CHARLES LENTZ & SONS
Makers of Surgical Instruments—Established 50 years
31-33-35 South Seventeenth Street **PHILADELPHIA, PA.**

DIRECTORY OF HOSPITAL AND ALLIED ASSOCIATIONS

SOCIETY	PRESIDENT	SECRETARY	NEXT MEETING
American College of Surgeons.....	Dr. J. M. T. Finney, 1300 Eutaw Pl., Baltimore	Dr. Franklin Martin, 30 N. Michigan ave., Chicago.	
American Hospital Association.....	Dr. Robert J. Wilson, superintendent New York Hospitals, New York	Dr. William H. Walsh, Philadelphia	September 11, 1917, Cleveland
American Medical Association.....	Dr. Rupert Blue, Bureau of Public Health Service, Washington, D. C.	Dr. Alex. R. Craig, 535 N. Dearborn st., Chicago	June, 1917, New York
American Nurses' Association.....	Anne W. Goodrich, R. N., Teachers' College, Columbia University, New York	Katharine DeWitt, R. N., 45 S. Union st., Rochester, N. Y.	1917, Philadelphia
Catholic Hospital Association.....	Rev. C. B. Moulinier, Marquette University, Milwaukee, Wis.	Dr. B. F. McGrath, Marquette University, Milwaukee	
Clinical Congress of Surgeons of North America	Dr. Fred B. Lund, 527 Beacon st., Boston	Dr. Franklin H. Martin, 30 N. Michigan ave., Chicago	
National League of Nursing Education	Sara E. Parsons, R. N., Massachusetts General Hospital, Boston	Effie J. Taylor, R. N., Johns Hopkins Hospital, Baltimore	1917, Philadelphia
National Organization for Public Health Nursing	Mary F. Beard, R. N., 551 Massachusetts ave., Boston	Ella Phillips Crandall, R. N., 25 W. 45th st., New York	1917, Philadelphia
State Hospital Associations			
Kansas Hospital Association.....	Dr. Samuel Murdock, Sabetha, Kas.	Dr. W. R. Dillingham, Halstead, Kas.	1917, Salina
Ohio Hospital Association.....	Rev. A. G. Lohmann, superintendent German Deaconess Hospital, Cincinnati, O.	Howell Wright, 308 Anisfield Building, Cleveland, O.	May, 1917, Columbus
West Virginia Hospital Assn....	Dr. G. C. Schoolfield, trustee Charleston General Hospital, Charleston, W. Va.	Dr. W. H. St. Clair, superintendent Bluefield Sanitarium, Bluefield, W. Va.	
Canada			
Canada Hospital Association.....	Dr. E. H. Young, Rockwood Hospital for the Insane, Kingston, Ont.	Dr. W. J. Dobbie, Toronto Free Hospital, Weston, Ont.	
England			
British Hospital Association.....	H. Wade Deacon, Royal Infirmary, Liverpool	Conrad W. Thies, J. Courtney Buchanan, Metropolitan Hospital, London	

$5,000.00



is what it cost us to produce **Creations That Excel**, but it is well worth the money. This handsome loose-leaf catalog of our line of **Aseptic Steel Furniture**, 9½x12½ inches in size, containing 224 pages and 318 illustrations, is in reality a text-book for hospital administrators on the subject of aseptic furniture. It describes and illustrates practically every item necessary to completely furnish a modern hospital. No administrator, whether or not he has any present intention of buying, should be without **Creations That Excel** on his desk or within easy access. This book will prove interesting and instructive, and it is

YOURS FOR THE ASKING

We want you to have it, so we ask that you fill in and mail the coupon below.

THE COLUMBUS ASEPTIC FURNITURE CO.,
Columbus, Ohio.

Gentlemen: Send me a copy of Creations That Excel, which I will be glad to look over. This request obligates me in no way.

Name.....

Hospital.....

Address.....

Washable Name Tapes

for sewing on articles of clothing

WILL NOT WASH OUT

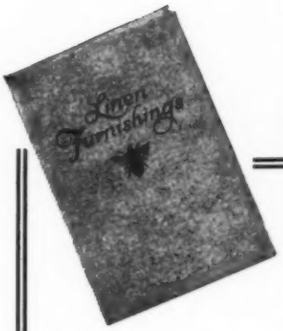
Tapes are easy to sew on, and the slight labor involved is less than that required to mark articles with indelible ink, sooner or later so unsatisfactory.

We have an interesting proposition for superintendents of Training Schools.

Price is 50c per 100

The Washable Name Tape Co.

1 Niagara Street **WINSTED, CONN.**



This book will interest you

"Linen Furnishings" tells all about the kind of linen you want—the kind that gives long wear and so reduces your linen expense. It tells about linen *made especially* to meet your requirements. It gives you a definite idea of who is using these goods, and other interesting facts about

BAKER LINENS

We want you to get acquainted with the long-wearing "H. W. B. Extra Heavy Round Thread" and "Sampson" Sheets and Pillow-Cases—our blankets, comfortables, spreads, crashes, towels, toweling, etc.

Write for this book NOW—we will be glad to send it, along with any samples in which you may be interested

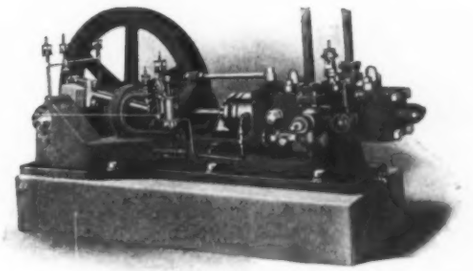
H. W. Baker Linen Company
Dept. H, 41 Worth St. NEW YORK CITY

752 So. Los Angeles St. LOS ANGELES, CAL.
453 Washington St. BOSTON, MASS.

RELIABLE
Vacuum Heating Equipment

Ideal for Hospitals because it makes the heating system noiseless and insures quick, even heat distribution at the temperature desired, and effects a great saving in fuel. If you want most efficient heating in your new Hospital, or better heating results in your present building, write for catalog of RELIABLE Heating Equipment, booklet "L," and list of prominent Hospitals in which RELIABLE Equipment is installed.

THE BISHOP-BABCOCK-BECKER CO.
Factories and General Offices, CLEVELAND, OHIO
New York, Chicago, Cincinnati, St. Louis, St. Paul, Milwaukee, San Francisco



The Kroeschell Carbonic Anhydride System for every cooling purpose in the hospital

The Kroeschell System meets every requirement—the keeping of meats, vegetables, and foods in perfect condition—the manufacture of ice for cooling purposes—cooling the drinking water system—preserving serums and specimens—and the cooling of patients' rooms and wards to a comfortable temperature on the hottest days.

It requires less space, is simpler in operation, and more practical and durable in construction, than any other system on the market. Carbonic anhydride is safe, odorless, and neutral toward all foods and materials. It is far less expensive than ammonia.

Principle

Carbonic anhydride (CO_2) gas is compressed in the compressor (one of which is shown above), the gas passing on to the condenser, where it is cooled and liquefied, and then expanded to gas in coils, where the cooling process takes place by the absorption of heat. The gas then returns to the compressor and the action is repeated. A small motor will run the plant.

The preferred system among the well-posted people of hospitals—some of which are the Michael Reese Hospital, St. Luke's Hospital, Presbyterian Hospital (Chicago), Grace Hospital, Henry Ford Hospital, Harper Hospital (Detroit), Sea View Hospital (New York), and many others.

Know more about this efficient, economical, and universal refrigeration system. Write for our booklet, "Hospital Refrigeration."

KROESCHELL BROTHERS ICE MACHINE COMPANY

450 West Erie Street CHICAGO
30 Church Street NEW YORK

Winter Days and Summer Days
are
THERMOS
DAYS
and Christmas is the best Thermos gift day of all!

Here is the ideal gift. Handsome and practical, *Thermos* delights everyone, giving years of perfect service at or away from home, day or night, in freezing or scorching weather.

For the Motorist—Doubles the pleasure of touring and pays for itself in a few trips—that's the *Thermos Motor Restaurant*. Savings can go for tires and gasoline.

For the Outing—You just wouldn't think of starting for the picnic in the woods or at the shore without *cold* drinks in *Thermos*.

For the Hunter—On a raw day a *hot* draught from the *Thermos Bottle* makes you forget you're wet and tired.

For the Yachtsman—When the sail bellies out as the sultry breeze springs up, *cold* grape juice from the *Thermos Bottle* is delicious.

For the Business Man—When you are reading late you can have piping *hot* coffee right at hand in the *Thermos Jug*.

For the Aged—A tempting *cold* beverage in the *Thermos Jug* is welcome to callers and is of great convenience for the aged and infirm.

For the Worker—When whistles blow, the *Thermos Lunch Kit* means a home-cooked meal with *steaming* coffee. Refreshing, no hurry, extra time for a smoke.

For the Bedroom—There is no need to leave the bed at night to get a *cold*, pure, refreshing drink. It is ready at arm's length in the *Thermos Jug*. And for the sick, of course, *Thermos* is invaluable.

For the Invalid—Save grandmother's steps. *Chilled*, pure drinking water is always instantly ready in the *Thermos Carafe*.

For the Golfer—At the "nineteenth" hole the *cold* fruit punch in the *Thermos Bottle* is always an attraction.

THERMOS
serves you right—food or drink hot without fire—cold without ice

All temperature-retaining bottles are *not* Thermos. There are many imitations, but only one real, genuine Thermos. Reliable dealers are proud to show you the THERMOS trade mark plainly stamped on every piece.

Keeps hot 24 hours **Keeps cold 72 hours**

Winner of the Grand Prize at every International Exposition

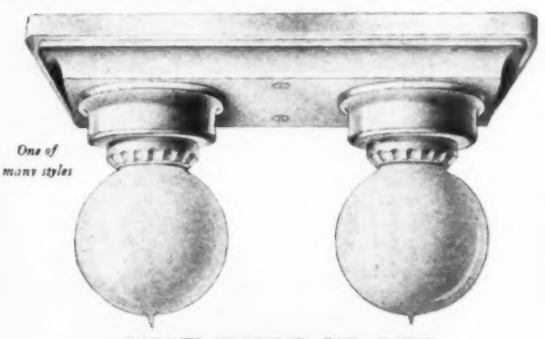
American Thermos Bottle Co.
35-37 West 31st Street, New York
In Canada: Toronto
Factory: Norwich, Conn.

Are You Buying Alcohol Free of Tax?

Do you know that a law provides its use free of tax for Universities, Colleges and Hospitals, which may apply to you?

F. O. BOYD & CO.
433 Washington Street
NEW YORK CITY

have made a specialty of this business for a great many years and will be glad to furnish you with all the details
FREE OF COST



JUST WIPE IT OFF WITH A DAMP CLOTH

TRADE MARK
AGLITE ALL GLASS
PATENTS PENDING

LIGHTING FIXTURE

Is absolutely hygienic. All glass—no metal—nothing to tarnish, check, discolor, or crack. Neither fumigation nor antiseptic solutions can harm it.

We are equipping many hospitals with various types of Aglite suitable for corridors, wards, private rooms, and bath rooms. Let us equip yours.

COMPLETE LITERATURE ON REQUEST
Send for printed matter illustrating many styles of the Aglite, also detailed description of the fixture

Luminous Unit Co., St. Louis, U. S. A.
NEW YORK, 30 Church St.
CHICAGO, 19 So. 5th Ave. PHILADELPHIA, 1020 Land Title Bldg.
BOSTON, Old South Bldg. SAN FRANCISCO, 641 Market St.

Stanolind
Trade Mark Reg. U.S. Pat. Off.
Liquid Paraffin
(Medium Heavy)
Tasteless—Odorless—Colorless

Throws No Burden on Liver or Kidneys

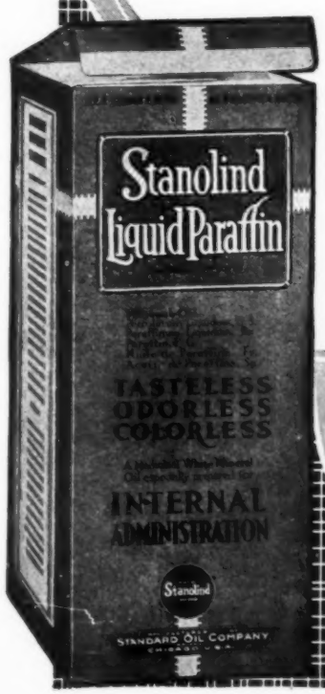
Stanolind Liquid Paraffin, being non-absorbable, throws no extra labor on liver or kidneys. These organs are often greatly embarrassed by the enormous amount of extra work given them by the free use of laxative mineral waters and other drugs.

For this reason Stanolind Liquid Paraffin, being mechanical in action, is pointedly indicated as a gentle laxative in cases of Bright's Disease, hepatic cirrhosis and other conditions in which these great vital organs are crippled.

The beneficial effects of Stanolind Liquid Paraffin are not diminished by continual use, as is the case with almost every other laxative. Stanolind Liquid Paraffin should be regarded rather as a mechanical than as a strictly medicinal agency.

When the effective dose of Stanolind Liquid Paraffiin is found, it is unnecessary to increase it, but, on the other hand, it may, in most cases, be gradually lessened.

A trial quantity with informative booklet will be sent on request.



Standard Oil Company
(Indiana)
72 West Adams Street
Chicago, U. S. A.

68

For those with aching feet—

For those who have weak arches, and who cannot stand long on hard floors without suffering

FOSTER ORTHOPEDIC RUBBER HEELS

offer threefold comfort—comfort to the arches when standing, comfort to the whole body when walking, and comfort of mind because of safety against slipping.

The physician who is constantly on the go, the surgeon or his assistant who stands for hours on the hard floor of the operating room, and the nurse who must hasten at every call—these and many others in hospital service are likely to find themselves troubled with the pain that comes from weak arches. They may suffer pain without being able to trace it to this cause, for it is felt often in the leg muscles as well.

When in doubt, wear Foster Orthopedic Rubber Heels. In many cases they will be found the ounce of prevention that is needed. Heavy people especially should take precautions. They are only 75 cents, attached; 50 cents by mail. (If you send to us direct, send outline of heel.)

FOSTER RUBBER COMPANY

114 Federal Street BOSTON, MASS.

Originators and Patentees of the Foster Friction Plug, Which Prevents Slipping

Look at this picture. Note the simplicity of the Lungmotor and how easily it can be operated.

You're Critical!

Hence you are in the very class of men to whom we appeal with confidence. Your profession teaches the "show me" spirit. You have to be convinced by actual proof. Nothing can compare with *facts* in a statement of claims when your interest is desired.

Do you know that there is one resuscitating device that matches up to all requirements? You affirm simplicity—this device has it. It must be safe—this device is. You insist on efficiency under all conditions—this device so seldom fails it almost can claim perfect efficiency. Such an apparatus is

THE INFANT LUNGMOTOR

is a small-size device specially made for Asphyxia Neonatorum. No maternity ward is complete without this apparatus.

The Lungmotor

The Device That Defies Death

and in order that you may be fully convinced, we ask you to let us submit proof of professional men like yourself—scores of them—whose sceptism has been overcome by facts.

It will be a genuine pleasure to let you have this evidence.

LIFE SAVING DEVICES COMPANY
184 North Market Street CHICAGO

TEAR OFF AND MAIL

Life Saving Devices Company, 184 N. Market St., Chicago
Give me authentic facts and material reasons why I should buy a Lungmotor.

Name _____ Hospital _____

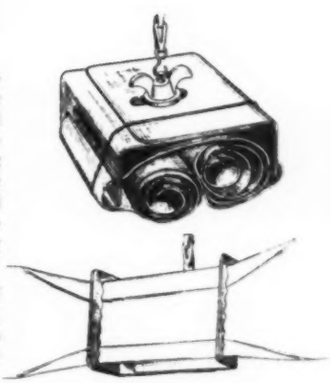
SIEBRANDT'S

Eveready TRADE MARK **BUCK'S EXTENSION**

Improved Model No. 6

This is the greatest Utility Surgical Appliance of the age. It serves all purposes where attachment to bed for patient is required. It can be quickly adjusted, and gives the maximum efficiency in producing desired results.

It saves hundreds of dollars of expense, especially in the equipping of new hospitals.



The illustration shows one of the many ways in which the Eveready Buck's Extension can be used.

Write for illustrated catalogue to

J. R. SIEBRANDT, Inventor and Designer of Surgical Appliances
Gloyd Building, Kansas City, Mo.
Eastern Office—131-133-135 Master Street, Philadelphia, Pa.

Reduce expense

New Oval Keeler or Baby Bath

Why should *your* hospital use our goods? Here's why hundreds of others are doing it—they have proved by tests that these goods are absolutely sanitary, and that they wear much longer than similar articles made of other materials. They are the most efficient goods to use—and the most economical as well.

No. 560

"XXth Century" Water Coolers

There is no danger of typhoid resulting from the ice when these coolers are used, as the ice is kept in a separate container. Water runs from the bottle to your glass, coming in contact on the way only with the porcelain of the cooling jar and silver lining of the faucet. They save ice money, too, paying for themselves in a short time, as the ice container is a non-conductor of heat and cold.

"Fibrotta" INDURATED FIBRE WARE

You will save the same old equipment expense, year after year, by choosing this more suitable ware, which lasts indefinitely. We make Fibrotta Chambers, Baby or Foot Baths, Pails, Umbrella Stands, Waste Paper Baskets, Trays and Spittoons.

Write for Catalog

CORDLEY & HAYES COOLER HEADQUARTERS
30 Leonard Street NEW YORK, N. Y.

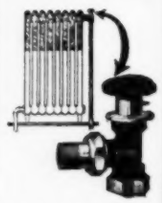
If You Are Planning to Remodel Your Building or Add New Addition

Remember to Specify

ADSCO HEATING

Atmospheric Pressure System
STEAM OR VAPOR
using the

ADSCO GRADUATED RADIATOR VALVE



Valve opened 50% gives 50% radiation—opened 25% gives 25% radiation — not 90% or 10%.

And the ADSCO Regulator

ADSCO Heating with ADSCO Specialties is the most improved method of modern heating with steam or vapor. Insures greater economy—gives quick results and more satisfaction—means more even and healthful heat, whether you take steam from individual boiler or underground main of a Central Station.

Simple System of Pipes—No Noise—No Leaky Valves—No Complicated Devices.

Saves 15 to 20% Installation Cost. Saves 20 to 30% Fuel Cost.

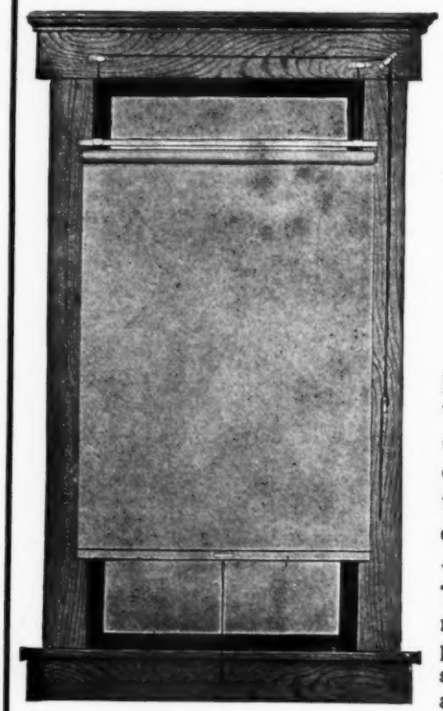
WRITE FOR BULLETIN 133-H

Names of your architect and steam fitter appreciated

AMERICAN DISTRICT STEAM COMPANY

General Office and Works: North Tonawanda, N. Y.

Branches: New York, Chicago, Seattle



Any area of shade at any altitude—

permitting ventilation or light to come from the top as desired.

This means much to the patient's eyesight, health and comfort.

Send to us for descriptive circular of our shades

LUTHER O. DRAPER SHADE CO.
Spiceland, Indiana

Elbow Type — For Clinic Lavatory

Niedecken Mixer

Patented

The Perfect Mixing
AND
Anti-Scalding Valve

For Shower, Lavatory, Bath, Shampoo, Etc.

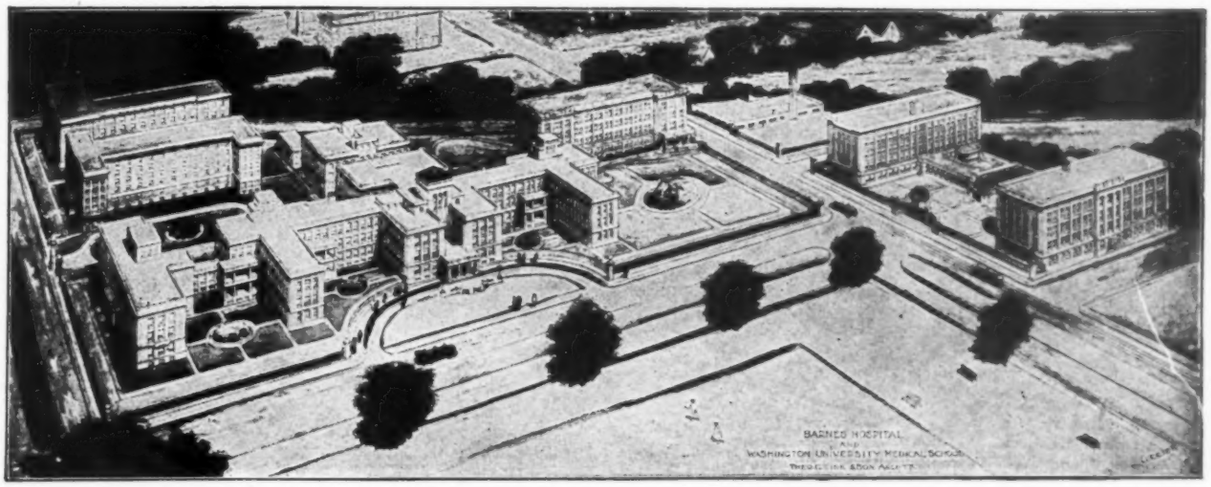
No Cams No Springs

Removable Bronze Seats

Hoffmann & Billings Manufacturing Company
MILWAUKEE, WISCONSIN

Write For Bulletin M H 8

THE Brecht COMPANY ST·LOUIS·
ESTABLISHED 1853



BARNES HOSPITAL, ST. LOUIS, MO.

REFRIGERATORS THAT REFRIGERATE

And Are Dry, Sweet, Easily Cleaned, and Permanent

FOR OVER 60 YEARS

BRECHT REFRIGERATORS have been "Standard" with Architects, Engineers and Experts in all lines using cold storage.

Sixty years and more thorough study given to problems of refrigeration have produced in BRECHT Large or Small Cooling Rooms many exclusive features making for efficiency.

RECENT LARGE INSTALLATIONS:

Barnes Hospital, St. Louis, Mo. - - - - - -	21 Boxes
Muehlebach Hotel, Kansas City, Mo. - - - - -	17 Boxes
Missouri Athletic Association, St. Louis, Mo. - -	22 Boxes

Can be adapted for Ice or Mechanical cooling.

Built-to-order Hospital Equipment entrusted to the hands of our expert designers is sure to give permanent satisfaction as to appearance as well as cold storage of supplies.

THE BRECHT COMPANY

Established 1853

ST. LOUIS, MO.

NEW YORK PARIS BUENOS AIRES

Important apparatus for hospital ought to

The Genuine Albee Electro-Operative Bone Set

with Hartley-Kenyon Sterilizable Shells

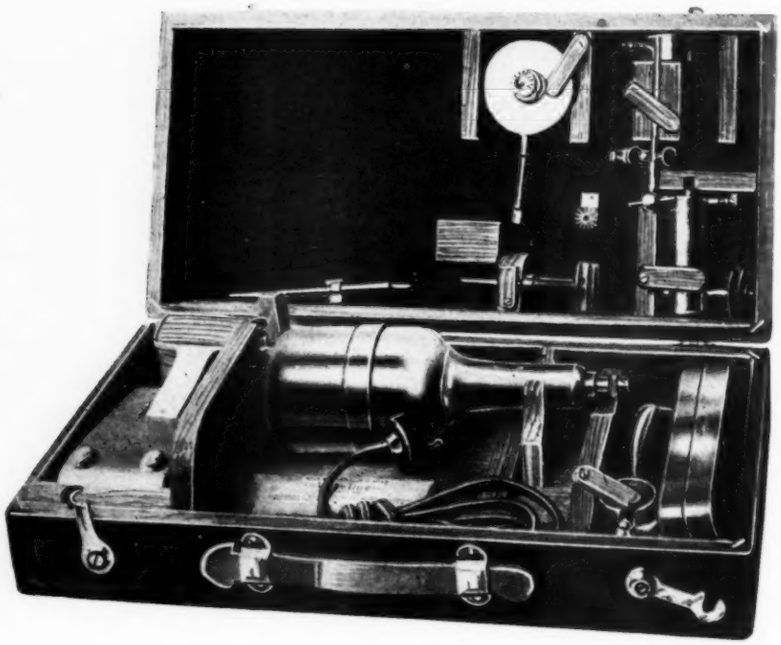


Fig. 1. The manner of holding saw, foot switch, and connection to electric wall fixture. Method of connecting tank of normal saline solution and spray attachment.

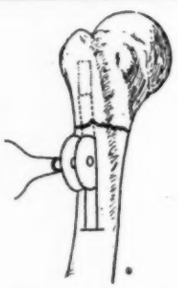


Fig. 2. Preparing gutter for inlay of tibial graft in a fracture at the neck of the humerus.

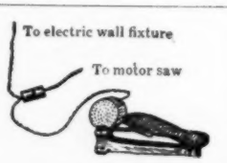


Fig. 14. Foot speed controller.

Fig. 3. Removing strips of bone, forming a gutter with tunnel so as to lengthen gutter and get a longer contact of graft into head of humerus.

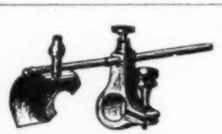


Fig. 19. Adjustable guard with spray to use in connection with single or twin saw (L).

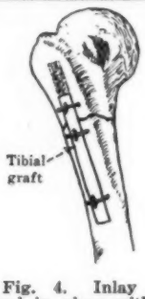


Fig. 4. Inlay graft fixed in place with kangaroo tendon.

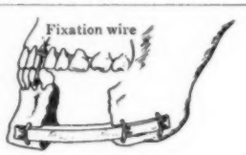
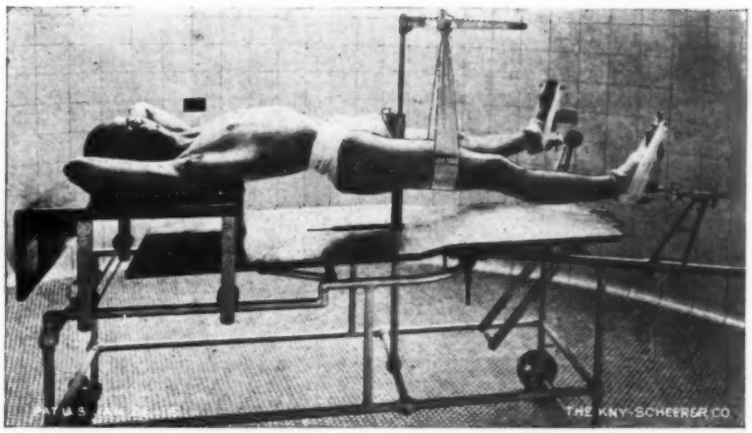


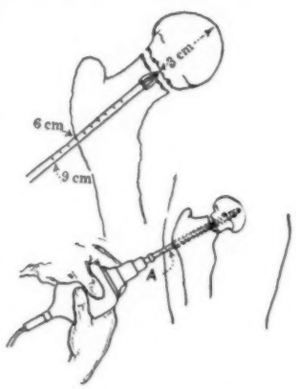
Fig. 5. Method of inlay graft on lower jaw so badly shattered as to leave a gap. Gutter cut with twin motor saw.

Send for the Hawley and Albee Bulletins

fracture work that every install and use



The Hawley Operating Table



When the end of the burr has reached the space between the fragments and is ready to enter the capital fragment, a reading on the graduated shaft of the burr is taken at A; one is then able to tell by a study of the roentgenogram just how far the burr should penetrate this fragment.

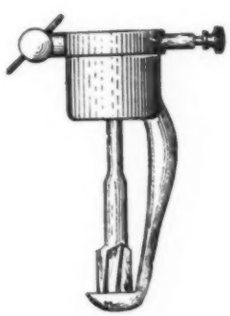


Fig. 26. Revolving octeotome for laminectomy or plastic skull work.

Fig. 7. When burr has reached the capital fragment.

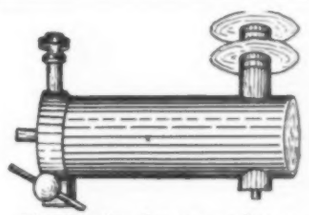


Fig. 24. Angular saw used as a single or twin saw (N).

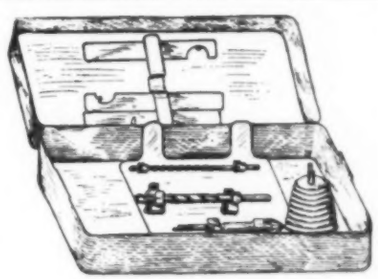


Fig. 25. Sterilizer case for drills and burrs.

Fig. 11. Graft peg for fracture of neck of femur in place.

Send for the Hawley and Albee Bulletins

THE KNY-SCHEERER CORPORATION

Manufacturers of Surgical and Therapeutic Instruments and Apparatus, Furniture, Sterilizers, X-Ray Apparatus, Etc.

404-410 West 27th Street **NEW YORK CITY**

TUBES OF DISTINCTION

UNDER *OUR* EXPERT BACTERIOLOGIC OBSERVATION
FROM SLAUGHTER OF ANIMAL TO FINISHED TUBE

Under these conditions, and as we treat it, the gut is obtained in a sterile condition from selected healthy animals, and never knows infection.

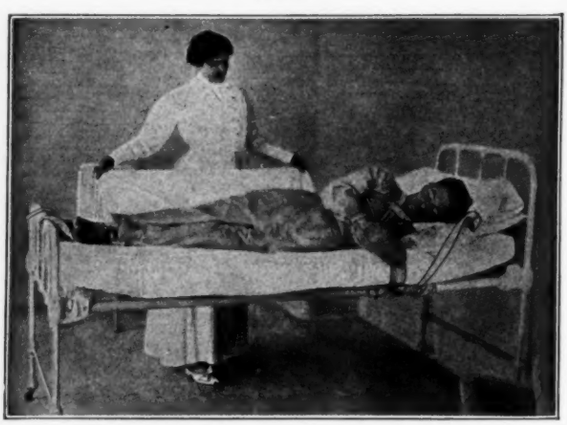
Not only is the surgeon assured a perfect strand, of maximum tensile strength, but he is provided the ligature in a tube which cannot roll, that breaks with a clean fracture, and reduces packing bulk about one-half.

Write for Catalog and Samples

THE HOLLISTER-ASHLAND LABORATORIES
6620 Kimbark Avenue, CHICAGO, ILL., U. S. A.

HOLLISTER LIGATURES
NOW IN THE NEW TUBE

McCALMONT HUMANE RESTRAINT
Patented



Linen being changed while patient is under restraint

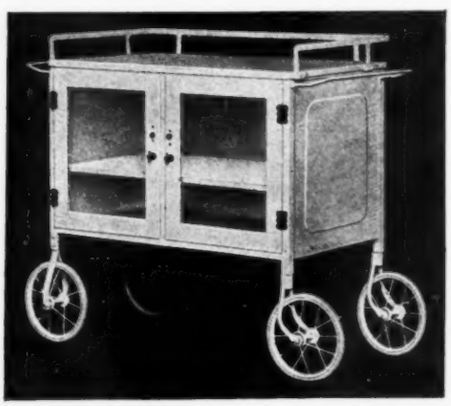
Safe—Sanitary—Sane

Use This Device and Avoid Fatalities in your Institution

On demonstration in the Permanent Model Hospital Exhibit of the

National Hospital Bureau, Inc.
8 West 40th Street NEW YORK

COLUMBIA SANI STEEL INDIANAPOLIS



New catalogue showing new designs just out.

Send for a copy.

MOORE BROS. INDIANAPOLIS

Columbia SANI-STEEL

The Newspapers Made Good

PULMOTOR NOT TO BLAME

Apparatus Which Burst at Canton, Aug. 7, Not Well Known Device.

The Plain Dealer in its issue of Aug. 7 published a statement under a Canton date line to the effect that six persons had been burned while attempting to revive a drowned girl, "when the oxygen tank attached to a pulmotor which they were using burst."

The Plain Dealer has received information that the apparatus which was responsible for the injuries referred to in the above statement was not a pulmotor but another device used for the purpose of resuscitation. It is further stated that the construction of the pulmotor and the principles upon which it is operated preclude the possibility of such an accident.

The pulmotor is manufactured by the Draeger Oxygen Co of Pittsburg and is widely used in Cleveland, where it has repeatedly demonstrated its great value in cases of drowning suffocation or similar accidents. At the time of the recent tunnel disaster it was claimed that if pulmotors had been available at the crib several lives would have been saved

Cleveland Plain Dealer 9-13-16

WHAT EXPLODED.

The error of a correspondent at Canton, Ohio led THE ENQUIRER to publish on August 8 a statement that six persons were injured in the city of Canton by the explosion of the tank of a pulmotor being used in an attempt to revive a child that had been drowned in a lake near that city. It is disclosed, upon investigation, that a pulmotor was not used but a lungmotor

THE EDITOR.

Cincinnati Enquirer, 9-9-16

FACTS ABOUT PULMOTORS.

To the Editor of the Herald:

In your issue of Aug. 20 you published an item entitled 'Pulmotor explodes' 15 persons are burned.' This comes as telegraph news from Canton, O., and the body of the text states that some 15 men and women were burned when acid in the tank of a "pulmotor" exploded.

Permit me to state that no pulmotor was used in this effort at resuscitation, also to emphasize the fact that no acids are involved in the operation of any pulmotors. FRANK SEAMAN

New York Sept. 2.

Boston Herald 9-13-16

RECENTLY three prominent newspapers published an account of a drowning accident at Canton, Ohio, in which six of the rescuing party, while attempting to revive the victim of the accident, were badly burned by the explosion of an acid container on the resuscitation device they were using.

In the newspaper accounts PULMOTOR was referred to as the device used.

But the newspapers made a mistake—one which they later acknowledged. Read these acknowledgments at the left.

Nothing could better emphasize the absolute necessity in resuscitation work of a device that is safe. The PULMOTOR is safe.

NOT ONE CASE IS ON RECORD WHERE ITS USE HAS RESULTED IN INJURY TO EITHER OPERATOR OR PATIENT.

It is correct physiologically as well as constructively. Its principle absolutely precludes injury to the patient's lungs. Hundreds of lives have been saved by its timely use and *there is no evidence on earth carrying greater conviction than this.*

There is only one genuine PULMOTOR—the genuine always bears the name, DRAEGER

The DRAEGER
OXYGEN APPARATUS CO.
415 First Avenue Pittsburgh, Pa.

-and Pulmotor was exonerated

CONCERNING THE CHARLES B. TOWNS HOSPITAL FOR DRUG AND ALCOHOLIC ADDICTION

Its Relation to the Medical Profession and to General Hospitals

The Charles B. Towns Hospital occupies a unique position among hospitals. It is the only institution of its kind that scientifically treats cases of habits and addictions in a definite, medical way.

On account of the prominence which this work has had from time to time, it might not be necessary to tell the readers of The Modern Hospital that every phase of the work here is carried out on the most important ethical, hospital plane; that the treatment employed here has been fully published to the medical profession through some of the most able medical men; and that the work in its every detail is carried out just as perfectly as we know how.

The occasion of this advertisement was a suggestion from the head of The Modern Hospital, who, after a close observation of the hospital and its work, realized its great importance and need among the general hospitals. Our work here is nothing more nor lesss than that of a clearing house for the medical profession and the general hospitals; and it cannot be associated in any of its details with that of the sanitariums or the usual institutes that colonize patients of this type.

We would like the heads of the hospitals in this country to become better acquainted with the work as carried out here, as it unquestionably fills a great gap in dealing with this habit problem.

To impress on you the magnitude of this work, we can say without the slightest egotism that we have the most completely equipped and delightfully situated hospital in this part of the country. The hospital last year received and dismissed nine hundred patients, and for the current year we have greatly exceeded last year's work. It doubtless will interest you to know that nearly three-fourths of these patients were referred to this hospital by other hospitals and by medical practitioners.

To further impress on you the magnitude of this work, we will state that we have a staff of four resident physicians besides a consulting staff composed of as able medical men as there are in this country, and the founder of this work devotes his entire time to it exclusively and is in personal charge of its every detail.

To render our work still more effective, and to make its effects as permanent as possible, we have recently opened a new Department of Physiologic Therapeutics in connection with the hospital, so that our patients now have every possible advantage of hydro-, electro-, and masso-therapy by institutional treatment. The department has been inspected by competent authorities, and declared to be the most complete single unit of installation anywhere known, without exception. It is in charge of medical specialists of exceptional experience, and under their direction has already proved its great value in completing our treatment and contributing to the permanency of the patient's freedom from narcotic habituation.

The founder of this work has written extensively on this subject, and every detail and development of his work has made new medical history in dealing with habits and addictions. He would be glad to send to those interested, not only full information relative to the institution, but a volume which contains his views and ideas, taking up, not only the medical, but the sociological, side of this vast problem.

We extend to those interested—the superintendents of other institutions, and physicians—a cordial invitation to visit us. Every courtesy will be extended them.

THE CHARLES B. TOWNS HOSPITAL

293 Central Park West **NEW YORK CITY**

It is our plan to use a page in The Modern Hospital monthly, and from time to time we are going to bring to the reader's attention the different important features connected with this special line of work.

The Battle Creek Sanitarium

The Battle Creek Sanitarium hospital differs from most hospitals in the fact that in addition to hospital facilities, it supplies two things:

First, a complete equipment for giving physiologic or non-medicinal treatment of every sort recognized in scientific medicine, and

Second, the comforts and luxuries of a first-class hotel minus the confusion, bustle, tobacco smoke, and other features of hotel life likely to be offensive to a delicate invalid.

The Battle Creek Sanitarium system, which has been developed by forty years of research and practical experience, requires, first, the most thoroughgoing examination which can be made by means of a research equipmemt which includes every means of investigating the structure and functions of the human body known to medical science, including the electrocardiograph, apparatus for metabolism studies, and various graphic methods which are ordinarily found only in special laboratories.

Another special feature of the Sanitarium hospital is a scientifically organized dietetic department, which makes it possible for the physician to prescribe the diet for each patient with the same accuracy with which drug prescriptions are made.

Trained experts are employed in the culinary department and diet kitchen, and the services of fifteen trained dietitians are constantly utilized in looking after the dietetic needs of individual patients.

Another important feature is a well-arranged program which keeps the patient busy with appropriate exercises, treatments, and entertaining diversions during all his waking time, although special provision is also made for rest-cure patients and others whose mental and physical activities must be restricted. The program includes diverting occupations, such as weaving, basketry, sloyd and other handicraft.

The medical corps includes over 400 trained nurses and attendants and a faculty of thirty-five physicians, including able experts in the various medical specialties.

The general atmosphere maintained in the institution is that of a pleasant, homelike hotel, with an abundance of light, sunshine, flowers, music (an orchestra is in attendance daily), with evening lectures, concerts, entertainments, and various diversions, and, with all the rest, an optimistic, get-well atmosphere which excludes the discussion of symptoms and generally helps the invalid out of his morbid ruts through helpful "suggestion."

Illustrated literature and reprints by members of the Sanitarium faculty will be sent gratis at your request.

The Battle Creek Sanitarium, Box 181 Battle Creek, Mich.

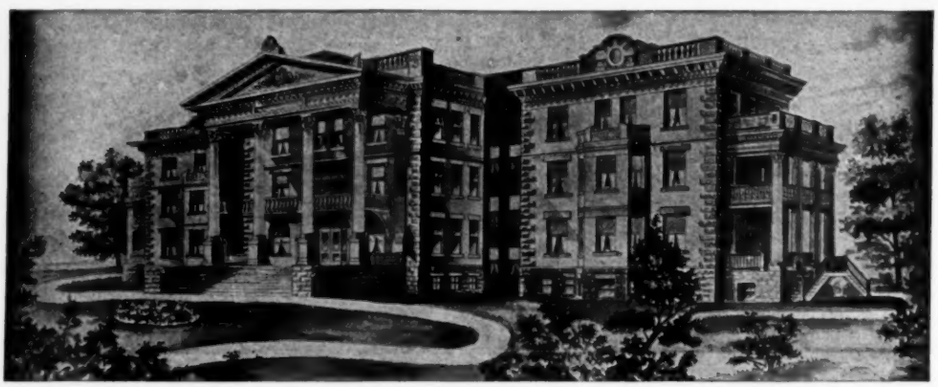
DIRECTORY OF SANATORIUMS — INSTITUTIONS FOR NERVOUS AND MENTAL DISEASES

DR. MOODY'S SANITARIUM, San Antonio, Texas.

For Nervous and Mental Diseases, Drug and Alcohol Addictions, and Nervous Invalids Needing Rest and Recuperation.

Established 1903. Strictly ethical. Location delightful summer and winter. Approved diagnostic and therapeutic methods. Modern clinical laboratory. 7 buildings, each with separate lawns, each featuring a small separate sanitarium, affording wholesome restfulness and recreation, indoors and outdoors, tactful nursing and homelike comforts. Bath rooms en suite, 100 rooms, large galleries, modern equipments, 15 acres, 350 shade trees, cement walks, playgrounds. Surrounded by beautiful parks, Government Post grounds and Country Club.

G. H. MOODY, M. D., Supt. T. L. MOODY, M. D., Res. Phys. J. A. McINTOSH, M. D., Res. Phys.



Waukesha Springs Sanitarium

FOR NERVOUS DISEASES

BYRON M. CAPLES, M. D.
Superintendent

Building Absolutely Fireproof

WAUKESHA, WIS.

SANITARIUMS

SACRED HEART SANITARIUM—For medical and neurological cases.

ST. MARY'S HILL—On separate side five blocks west. For drug and mild mental cases. Seven departments permit proper classification.

Both institutions conducted by Sisters of St. Francis of St. Joseph's Convent.

For booklet address Sister Superior or

DR. S. S. STACK, MED. SUPT., MILWAUKEE, WIS.

WALDHEIM PARK

A quiet, restful and homelike sanatorium having the most approved and modern equipment for the treatment of chronic and nervous diseases. It is ideally located in a beautiful 35-acre park on the north shore of Oconomowoc lake, with its own training school for nurses.

For further information address

DR. J. H. VOJE

Physician in Charge

Oconomowoc, Wis.

Oakwood Springs Sanitarium

The Lake Geneva Sanitariums

Lake Geneva
Wisconsin

Lakeside Sanitarium

Comprising two separate Hospital-Sanitariums, having separate buildings and separate grounds under one management, for the care of Nervous, Mental, and Habit Cases

OAKWOOD SPRINGS SANITARIUM—For mental and nervous cases requiring guardianship. All rooms are private, and each patient may have a room or suite, as may be required. There are no wards. Utmost freedom of house and grounds is afforded. Many of the most pleasant rooms can be entirely isolated from all others. A number of the bed rooms have private baths. The plumbing, heating, and electric lighting are new and modern. Superior system of ventilation. The building is fireproof. There are private parlors and dining rooms, trained nurses, teachers and masseurs. Located in beautiful park of seventy-three acres, overlooking the lake and city. No crowding is at any time permitted.

LAKESIDE SANITARIUM—For medical and general sanitarium cases requiring specialized treatment for nervous and mild mental diseases, with two buildings and grounds of ten acres, charmingly situated on the shores of the lake. Every useful form of bath and hydropathic procedure is provided, together with gymnastic exercises, Swedish movement and massage. Mental exercise and drills, together with requirements of physical and mental performance, are promoted, with a view to restoring, strengthening, or developing the faculties, particularly those of perception and will.

An invitation is extended to superintendents and hospital physicians to refer to us such of their nervous and mental disease patients as cannot be satisfactorily cared for in general hospitals. Our institutions are completely equipped and efficiently administered for these classes of patients; furthermore, the extent, topography, and beauty of the grounds and the advantages of Lake Geneva climate have a most salutary influence.

TO SAVE TIME, Hospital Superintendents and Physicians who refer patients to us are requested to call Superintendent or Assistant by long-distance telephone (Lake Geneva, 159) and direct operator to reverse the charges when wishing to inquire concerning the admission of patients. When notified of the time of expected arrival in Lake Geneva, carriage will be sent to the station to meet patients arriving.

For further information address

DR. OSCAR A. KING, Superintendent, LAKE GENEVA, WIS.

Or at Private Office, 7 West Madison Street, Corner State Street

Phone, Central 2508 **CHICAGO, ILL.**

OCONOMOWOC HEALTH RESORT

OCONOMOWOC, WISCONSIN

Built and equipped for treating Nervous and Mild Mental Diseases

Main line Chicago, Milwaukee & St. Paul Ry., 3 hours from Chicago—5 minutes from interurban line between Oconomowoc and Milwaukee

NEW, ABSOLUTELY FIREPROOF BUILDING

Forty-three acres of natural park surrounded by lakes and tree-covered hills. Situated in the garden spot of Wisconsin, the playground of the Central West. A beautiful country in which to convalesce. Number of patients limited, assuring the personal supervision of the resident physician in charge.

ARTHUR W. ROGERS, B. S., M. D.

THE STEPHENSON LYNN TRADE MARK MASS

Underground Garbage Receiver

Keeps your garbage out of sight in the ground, away from the cat, dog, and typhoid fly. An air ventilated receiver—no odor.

The most sanitary, satisfactory, and durable garbage receiver ever put on the market.

Opens with foot—hands never touch.

THE STEPHENSON LYNN TRADE MARK MASS

Spiral Truss-Ribbed Ash Barrel

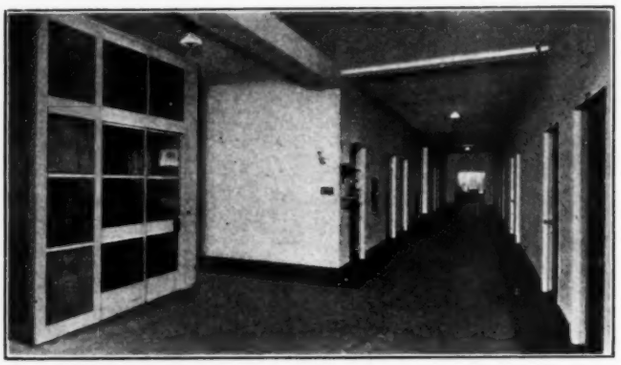
Finished with a rolling edge top and bottom, forming a finger grip. See our spiral truss ribs, ends all closed.

A smooth sanitary barrel, with inside seams all soldered.

A stronger and more durable barrel, yet so constructed that it is lighter in weight than the average.

SOLD DIRECT FROM FACTORY—SEND FOR OUR CATALOGUE
12 YEARS ON THE MARKET—LOOK FOR OUR TRADE MARKS

C. H. STEPHENSON, Manufacturer, 32 Farrar Street, LYNN, MASS.



WIRE GLASS FIRE PROTECTION

A Hospital must be protected in every way from fire.
Elevator and Stair Shafts should be inclosed as above.
All window openings should be equipped with metal frames and Wire Glass.

Fire protection in hospitals is receiving the careful study of the Board of Governors, the Architect, and Engineer because it is realized what fire means in a building of this character, where a large percentage of the patients are more or less helpless and, to say the least, in such a serious condition that exposure or shock would result in their death.

Wire Glass will protect them, and is recognized as a most important and necessary retardant in modern fireproof construction.

Write for samples, literature, or such information as you may desire.

MISSISSIPPI WIRE GLASS CO.

CHICAGO 223 Fifth Avenue, New York City ST. LOUIS

Have you thought of these points regarding silent call systems?

With

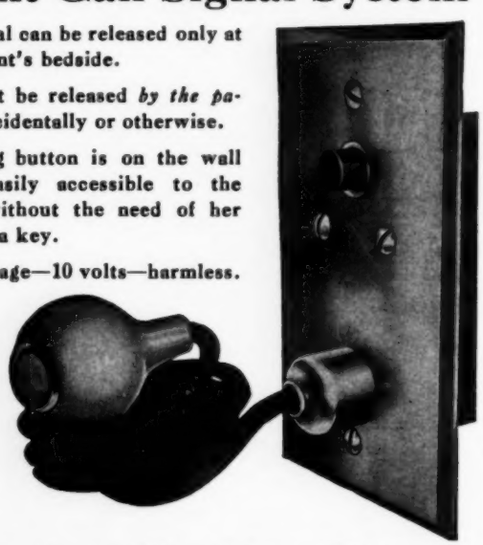
The Levison Silent Call Signal System

The signal can be released only at the patient's bedside.

It cannot be released *by the patient*, accidentally or otherwise.

Releasing button is on the wall plate, easily accessible to the nurse, without the need of her carrying a key.

Low voltage—10 volts—harmless.



Silent

Trustworthy

Safe

The Chicago Signal Co., Chicago

CÉLESTINS

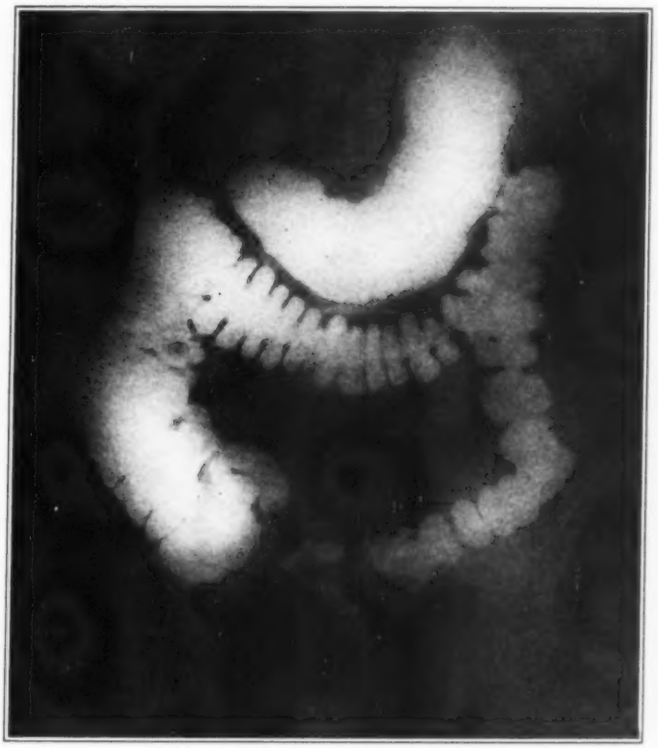
The place of CÉLESTINS Vichy in the dietary is distinctive and important. It is an alkaline water of diuretic action, and is indicated in cases of the following:

Chronic hepatic disorders; gastric and intestinal indigestions; acid dyspepsia; chronic catarrhal gastritis or enteritis; rheumatism; diabetes; inflammation of the bladder; and a large number of minor ailments.

There is no Vichy but that bottled by the Government works at Vichy, France. Order and accept only CÉLESTINS Vichy, otherwise you are getting merely a beverage.

A booklet on the therapeutic uses of CÉLESTINS Vichy will be sent on request.

35 South William Street
New York City



Eastman X-Ray Film

WHEN the case is involved; accuracy in details and deep penetration are necessary in order to make the diagnosis certain.

Those who know them, use Eastman X-Ray Films for abdominal work. Practically indestructible; they *cost less* than plates and are easier to handle and file.

For sale by all supply houses. Pamphlet on request.

EASTMAN KODAK CO., ROCHESTER, N. Y.

Curity
TRADE MARK

HOSPITAL GAUZE

The Six Leading Grades

3A, 2, S — These grades are best adapted for dressings

1, D, 4 — The favorite grades for all hospital bandages

The Complete Line (14 *grades*) of Curity Gauze Meets Every Hospital Demand for Quality and Adaptability

LEWIS MANUFACTURING COMPANY
WALPOLE, MASS.
Branch Offices: New York—Chicago—Oakland, *Cal.*

FRIES BROS.

92 READE STREET NEW YORK

Manufacturers of

"KELENE"

(Pure Chloride of Ethyl)

DOCTOR:

LOOK—READ—THINK

"KELENE" has proved an ideal Anesthetic for LOCAL and as an Adjuvant to Ether and Chloroform in

GENERAL ANESTHESIA

Free from all dangerous after-effects. Administered in our

AUTOMATIC GLASS SPRAYING TUBES

works quickly, pleasantly, and thoroughly. TRY IT, and be convinced.

Sole Distributors for the United States

MERCK & CO.
NEW YORK RAHWAY ST. LOUIS

***Send now* for our *list* of modern *Hospitals* and *Sanitariums* equipped with the**

Dependable Blodgett Oven

This Oven is a *perfected and finished article,* and has been on the market for *70 years.*

Specify for your kitchen outfit a *Blodgett Oven.* Made in several sizes, and burns coal, wood, natural or artificial gas.

Send now for a description of this Oven and our regular BLODGETT OVEN LITERATURE

THE G. S. BLODGETT COMPANY
BURLINGTON, VERMONT

Expert Advice

The reason that people come to your hospital is that *they want* expert advice and expert treatment.

No sensible person would advise one who is sick to experiment with medicines and treatments to find a cure.

Sick persons require expert advice, and that is why they come to hospitals.

You can take this statement and apply it to the hospital lighting system.

Those who know say that less than 10% of the hospitals in the country are adequately lighted. And the reason is that those responsible for the condition do not seek expert advice.

Illumination is an art in itself, and requires years of experience and study. So you who would have efficient lighting systems in your hospitals cannot get them by making costly experiments. You must consult someone who knows—obtain expert advice.

Westinghouse Service places this expert advice at your disposal without cost to you. Why not take advantage of it? A post card will bring it to you.

Westinghouse Lamp Company

Atlanta	Chicago	*Dallas	Los Angeles	Philadelphia	Salt Lake City
Baltimore	Cincinnati	Denver	Milwaukee	Pittsburgh	San Francisco
Boston	Cleveland	Detroit	New Orleans	Portland	Seattle
Buffalo	Columbus	Kansas City	New York	St. Louis	Syracuse

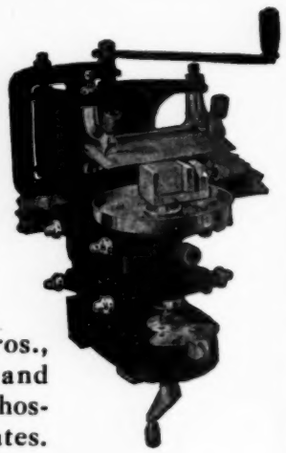
*Westinghouse Lamp Corporation

Export Sales Dept., No. 165 Broadway, New York City

For Canada—Canadian Westinghouse Co., Limited, Hamilton, Ont.

SPENCER FREEZING MICROTOME No. 880

AUTOMATIC



PERFECT for Frozen Section Work, either with CO_2 Gas or Ether.

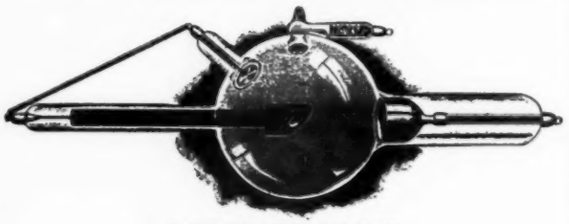
Adapted also for Paraffin and Celloidin.

Used by Mayo Bros., Rochester, Minn., and by over 500 other hospitals in United States.

GET OUR PRICES
ON MICROSCOPES, MICROTOMES, FREAS' ELECTRIC INCUBATORS, GAS INCUBATORS, STERILIZERS, LABORATORY APPARATUS, STAINS, ETC.

SPENCER LENS COMPANY
BUFFALO, N. Y.

Improved Transformer Tube With Steel Jacketed Cathode



PATENT APPLIED FOR

No. 100 Tungsten Target Transformer Tube; price, $35.00

We are originators of Steel Jacketed Cathode Tubes

KESSELRING X-RAY TUBE COMPANY
INCORPORATED
136 W. Lake Street CHICAGO
Phone, Main 5288

A SPECIAL X-RAY EQUIPMENT

for the small hospital where high-class X-Ray work is wanted, but where the facilities have to be bought on an economical basis. Read the list given herewith.

We guarantee to have you do x-ray treatment, fluoroscopy, and radiography to your satisfaction with this equipment.

The Meyer System of Radiographic technique plus the Meyer System of personal instruction makes it possible for the beginner to obtain as good radioscopic results as experienced radiographers.

For fluoroscopy we require not to exceed two milliamperes. Stomach and intestinal work offers no difficulty.

READ THE LIST, AND SEND FOR THE PRICE NOW YOU CAN MAKE A BIG SAVING

No. 4 Meyer Noiseless Interrupterless, delivers up to 100 milliamperes.
No. 7 tube stand.
Three 7-inch tungsten target x-ray tubes.
One negative examination cabinet.
One stereoscopic plate changer.
One x-ray proof-plate chest.
One radioscope.
One electric darkroom lamp.
Selection of 8x10 and 11x14 x-ray plates.
Set of fixing and developing trays.
Developer and fixing chemicals.

LARGER APPARATUS AND EQUIPMENTS OF ANY SIZE

THE WM. MEYER COMPANY
825 West Washington Boulevard Chicago, Ill.

SERVICE
WITH A CAPITAL "S"

Real service is principally concerned with furnishing the goods—not repairing them. If the goods are made right and installed right, "you should worry" about repairs.

When contracting for Roentgen equipment, specify immediate delivery—then see how many firms are able to take your order.

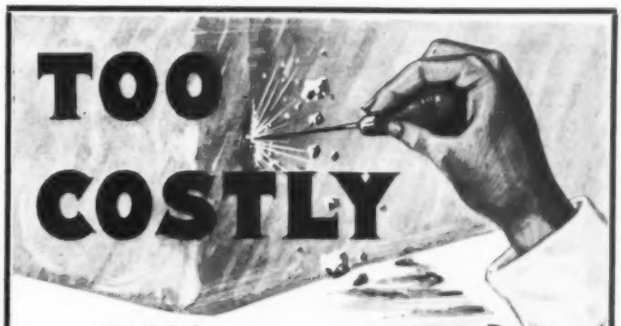
When X-Ray apparatus is needed, it is needed badly. We are usually in a position to make shipments within 24 or 48 hours after receipt. The shortage of material has not affected us. We are selling and shipping more goods than ever. Notwithstanding the great increase in the cost of materials, we have not advanced our selling prices.

The HOGAN SILENT ROENTGEN TRANSFORMER is more popular then ever. Keen, discriminating Roentgenologists who are willing to judge for themselves are learning in large numbers that this is the machine that gives SERVICE.

Are you interested? If so, our catalogue is at your disposal.

McINTOSH BATTERY AND OPTICAL CO.
217-223 N. Desplaines Street
Dept. 32
CHICAGO, ILL.

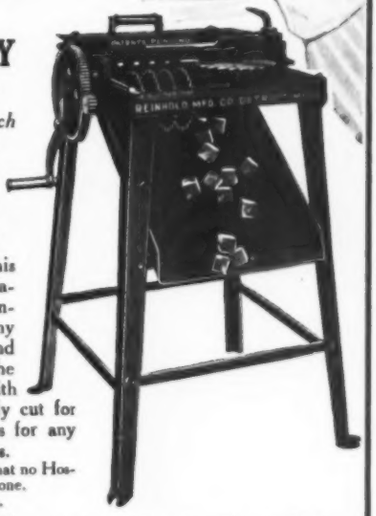
TOO COSTLY



This Method
TOO COSTLY
for Hospital Purposes

Because it wastes too much time, labor and money.

"REINHOLD"
ICE CHOPPERS OR SHAVERS



entirely do away with this leakage, and their installation means greater efficiency and economy—economy in the saving of ice and labor, and efficiency in the speed and easiness with which ice can be tastily cut for cooling drinks and dishes for any of the many hospital uses.

The original cost is so small that no Hospital can afford to be without one. Write for prices and discounts.

The Reinhold Mfg. Co., 133-39 Beaubien St., Detroit, Mich.

THE K-K CO.

K-K

The recognized hall mark of reliable quality in X-ray apparatus and accessories.

Ask any Roentgenologist

The Kelley-Koett Mfg. Co.
Covington, Kentucky
Catalog No. 22 just off the press.

King Model X-Ray Machine

Everything Electrical *for the* Hospital

X-Ray—High Frequency—Galvanic and Faradic—Diagnostic

Write to Dept. H

WAPPLER ELECTRIC CO., Inc.

Branch:
1871 Ogden Avenue
CHICAGO

Main Office and Factory:
173 East 87th Street
NEW YORK

—more readily soluble in water

Here is a new form of probably the most widely used antiseptic—boric acid. It is granulated by a recently discovered process, the granulation occurring in the process of crystallization, and not through the use of crushers.

For this reason it is far more readily soluble in water than is the powdered or crystal boric acid, and is a more convenient form for general routine use in the hospital, in private medical practice, or in compounding prescriptions in the pharmacy.

Of course,

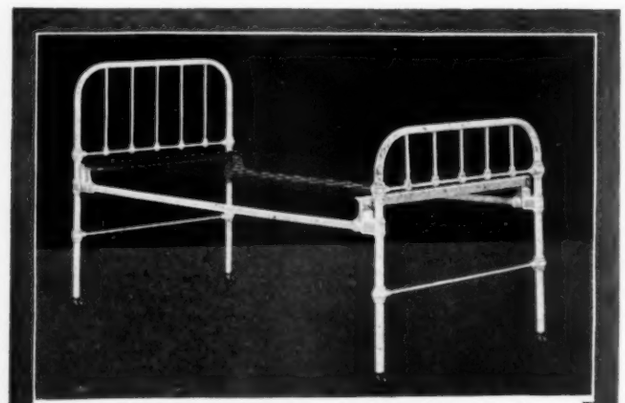
20 Mule Team Powdered Boric
U. S. P.

serving another purpose than that of the granulated form, is also widely used. This snow-white crystalline powder, ground to impalpable fineness, soothing, healing, and gentle in its effect, is one of the safest and most effective antiseptics known.

Specify 20 MULE TEAM *GRANULATED* BORIC ACID when purchasing boric acid for uses in solution. For use as a dusting powder specify 20 MULE TEAM *POWDERED* BORIC.

Send for free sample packages and full information.

PACIFIC COAST BORAX COMPANY
CHICAGO
NEW YORK
OAKLAND
CAL.



Our No. 187. Head, 44 in. Foot, 36 in. Spring, 26 in. from floor. Sizes 2-6, 3-0. Furnished with Fosterlink or Woven Wire Fabric Spring.

FOSTER "IDEAL" Beds and Cribs

Simple—Strong—Practical

Giving excellent service in many institutions. Clean, aseptic, white enamel finish. Strong 3-piece construction. Tough malleable end connections. Practically indestructible and easy to set up. Many styles and patterns are illustrated in our catalog. Write for it. We make special beds to any specifications.

Foster Bros. Manufacturing Co.
UTICA, N. Y., and ST. LOUIS, MO.

NURSES' OUTFITTING ASS'N INC
450 Fifth Avenue at 40th Street~New York

READY TO WEAR

Colored Uniforms	from	$2.35
White Uniforms	from	$2.75
Caps	from	.15
Collars	from	.15

Cuffs, Aprons, Bibs
Surgical Gowns at
Moderate Prices~

ALSO
MADE TO ORDER

Send for Catalog A. E.

IODIZED

Kangaroo

Tendons

FINE MEDIUM COARSE HEAVY

IODIZED TENDONS prepared by a method of sterilization which makes the tendon mildly antiseptic as well as soft, pliable and strong.

HEAVY TENDONS specially adapted for Bone Surgery.

SPECIAL DISCOUNTS TO HOSPITALS

BIGELOW, CHAPIN & YOUNG

MANUFACTURERS

Sterile BCY Products

Laboratories, 739 Boylston Street Boston, U. S. A.

Art Metal
Jamestown, New York
U·S·A

You will probably never have a fire—but if unfortunately you should, think of the relief that Art Metal Steel Hospital Equipment would contribute.

Art Metal won't *warp*, *stick*, *nor burn*.

That is one reason why *you* should know more about Art Metal. Our new Hospital Service Bulletin points out many more. Why don't you send for it and see?

Art Metal Construction Company

Incorporated

412 Gifford Avenue Jamestown, New York

This illustration shows one of more than a dozen styles of tables used by Schools and Hospitals for their classes in Domestic Science and Dietetic Instruction

DOMESTIC SCIENCE TABLE NO. 12

We are the largest exclusive manufacturers of this class of equipment in the world and there are now probably more than a half million students learning to cook on our tables

Our Catalog No. 15 illustrates our complete line and will be of interest and assistance to those planning such departments

E. H. SHELDON & COMPANY, Muskegon, Mich.

KORA-KONIA

A Special Dusting Powder

Is without an equal as a bed-sore preventive.

KORA-KONIA, absorbent, non-irritating and a protective agent, is invaluable as a preventive of bed-sores and other irritations caused by long lying in bed.

It is mildly astringent and haemostatic, and uniting its moisture-resisting qualities with these values to make it a potent agent in the soothing and healing of inflamed, moistened or discharging surfaces. It is an effective mechanical lubricant, its antacid and aseptic properties enabling KORA-KONIA to maintain a sterile condition obtained by the use of germicides, but without the irritation characteristic of an excessive amount of antiseptic or inert agents.

KORA-KONIA, the new dusting powder, is being prescribed in the treatment of acne, dermatitis, eczema, intertrigo, in severe cases of chafing, in shingles, eruptive fevers, after operations for boils and carbuncles; for umbilical dressings; in the care of umbilical hernia; and in obstinate cases of sunburn, prickly heat, nettle-rash, chicken-pox, measles, scarlatina and all itching, inflamed and irritated skin.

Made and introduced by Mennen, KORA-KONIA has the Mennen reputation behind it. Meeting that reputation, it has the endorsement of thousands of physicians who have tried and are using the wonderful dusting powder.

It is indispensable in the hospital.

Send for samples so that you, your staff and nurses can give it the trial we conscientiously believe KORA-KONIA deserves by all in the medical profession as well as the hospital field.

It can be bought from your druggist or dealer.

Full-size package, 25 cents postpaid.

THE HOUSE OF MENNEN

NEWARK, N. J.

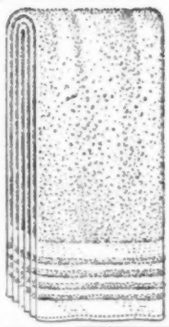
QUALITY GOODS

When buying from us always bear in mind that you are getting **QUALITY GOODS.** We never cheapen materials in order to quote you a lower price and make you believe that you are getting a bargain. Such **BARGAINS** are dear at any price. We are first and foremost a **QUALITY HOUSE** and you can rest assured that for every dollar you spend with us you are receiving 100 cents' worth of first class merchandise.

It is our desire to keep these prices in effect as long as possible; however, on account of the constantly increasing cost of this merchandise, we reserve the right to withdraw same at any time.

Heavy Bath Towel

You will find that the bath towel here illustrated is high grade in every respect and particularly adapted to hospital use, where good service is essential. The soft surface nap and heavy body render it especially desirable.



The splendid absorbent qualities of this towel make it far more satisfactory than those ordinarily sold at this price. Bleached pure white. Well woven of extra quality yarns.

No. 5E342
Doz. $3.45

"Pix" Crochet Bed Spread

If you are looking for a bed spread that will stand up exceptionally well under hard wear and at the same time keep its attractive appearance we strongly recommend the "Pix" Crochet line. These spreads will meet satisfactorily the demands of the hospital where quality is essential. Made of extra long pure white fiber in the handsome Marseilles pattern here shown. An attractive value at our prices.

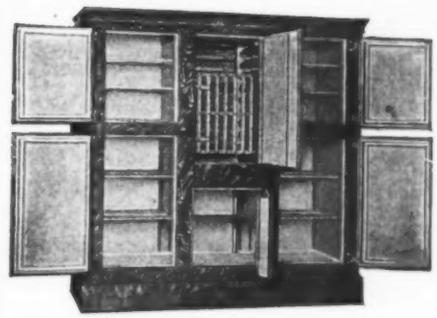
No. 5E2373 62x86 in. Doz. $17.50 **No. 5E2375** 80x90 in. Doz. $23.00
No. 5E2374 76x88 in. ..... Doz. $20.50

Crinkled Pattern Bed Spread

For a low priced, long wearing spread this cannot be excelled. Especially desirable for hospital use where good service is demanded. Woven of the best yarns and made to stand up under hard wear. Being lighter than the average bed spread, will launder as easily as a sheet and at the same time keep its attractive appearance. Unequaled at our prices.

No. 5E2383 63x90 in. Doz. $13.00 **No. 5E2385** 80x90 in. Doz. $15.75
No. 5E2384 72x90 in. Doz. 14.25 **No. 5E2386** 90x100 in. Doz. 18.90

ALBERT PICK & COMPANY
208 - 220 W. Randolph St., Chicago



GOOD HOSPITAL SERVICE

One of the most important factors in good hospital service is the quality of the food. This in turn is dependent on adequate and efficient refrigeration for the proper preservation of such foods.

Hospital officials realize this fact, and insist that their refrigerator equipment be scientifically correct and thoroughly efficient. The perishable foods must be kept fresh and wholesome.

These officials know from tests that

McCRAY REFRIGERATORS

with their patented system, meet the exacting requirements so necessary in hospital kitchens. McCray Refrigerators are used in many of the country's finest hospitals.

The McCray may be arranged for either ice or mechanical refrigeration. We build to order hospital refrigeration equipment, and our designing department will co-operate with architects who are planning the erection of hospital buildings.

Write for Catalog: No. 51 — Hospitals and Institutions. No. 92—For Residences.

McCray Refrigerator Company
666 Lake Street KENDALLVILLE, IND.

New York Office
McCray Building, 7-9 W. 30th St.

Chicago Office
1000 S. Michigan Ave.

Agencies in all principal cities

Providence Hospital, Seattle, Wash., McCray Equipped

DEPARTMENT OF COMMERCE, Washington, D. C.

SHORTAGE OF PAPER MATERIAL

Save Your Waste Paper and Rags

The above is the heading of a bulletin issued by the Department of Commerce on the importance of saving all paper materials. The scarcity of raw materials is causing paper to advance in price beyond all previous marks. Help the country by saving your waste and profit by the high market by baling it in

THE ALSTEEL FIREPROOF BALER

You will then be in position to sell your waste at a price that will return you from 100 percent to 500 percent annually on the investment. In addition, you will add to your fire protection by storing your waste in a fireproof receptacle. Baled waste has a market value and is safe to store. Loose waste is a fire hazard and worthless.

Write for catalog, information relative to paper market, and our SPECIAL PROPOSITION TO HOSPITALS.

ALSTEEL MANUFACTURING COMPANY - - - Battle Creek, Mich.

Rennet Ferment in Its Purest Form

Physicians, nurses, and those in charge of hospitals, sanitariums, etc., were quick to recognize the value of Junket for the sick and convalescent, because of its being rennet ferment of absolutely uniform purity and in a definite quantity of known strength.

Junket

MADE WITH MILK

is a food digestible even in cases where raw milk is not. The rennet action in coagulating the milk makes it less susceptible to injurious effects of acids, such as fruit juices, etc. It is an ideal food, especially for children, and most palatable in any one of many forms.

Sold by grocers and druggists or direct by us to the profession at 75c per 100 tablets.

Send for interesting treatise, "Junket in Dietetics" and free sample

Chr. Hansen's Laboratory
Isabel Street LITTLE FALLS, N. Y.

TEN TIMES

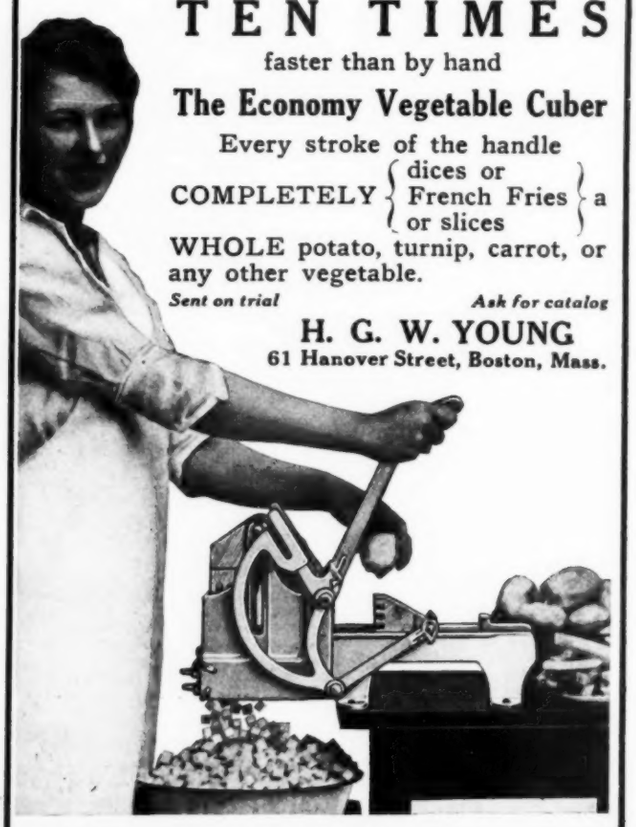
faster than by hand

The Economy Vegetable Cuber

Every stroke of the handle COMPLETELY { dices or / French Fries / or slices } a WHOLE potato, turnip, carrot, or any other vegetable.

Sent on trial *Ask for catalog*

H. G. W. YOUNG
61 Hanover Street, Boston, Mass.



DIRECTORY OF HOSPITAL SUPPLIES

Adhesive Plaster. Page
Johnson & Johnson ... 4
Alcohol (Tax Free).
Boyd & Co., F. O ... 60
Eastern Drug Company ... 56
Ambulances.
Cunningham, Son & Co., James ... 98
Rech-Marbaker Company ... 33
White Company ... 107
Anesthetics.
Albany Chemical Company ... 38
Fries Bros. ... 76
Mallinckrodt Chemical Works ... 40
Oxygen Gas Company ... 106
Parke, Davis & Company ... 6
Squibb & Sons, E. R ... 2
Anesthetizing Apparatus.
Mueller & Co., V ... 110
Toledo Technical Appliance Company ... 104
Applicators.
Perfection Manufacturing Company ... 88
Back Rests.
Butler Back Rest Company ... 109
Reid Bros. ... 16a
Bakery Equipment.
Read Machinery Company ... 21
Triumph Manufacturing Company ... 99
Baking Powder.
Royal Baking Powder Company ... 4th cover
Baskets (Canvas).
Lane & Brother, W. T ... 110
Baths (Electric Light).
Burdick Cabinet Company ... 51
Edmands, Walter S ... 93
Beds.
Bernstein Manufacturing Company ... 22
Dougherty & Co., Inc., H. D ... 93
Foster Bros. Manufacturing Company ... 80
Hall & Sons, Frank A ... 117
Mandel Brothers ... 92
Simmons Company ... 31
Smith & Davis Manufacturing Company ... 115
Union Wire Mattress Company ... 122
Bed Attachments.
Butler Back Rest Company ... 109
Mercy Head-Rest Company ... 119
Beverages.
American Wine Company ... 51
Calumet Tea and Coffee Company ... 35
Welch Grape Juice Company ... 9
Blankets.
Rhoads & Fillman ... 16
Books.
Blakiston's Son & Company, P ... 52
Putnam's Sons, G. P ... 13
Binders for Hospital Records.
Hospital Standard Publishing Company ... 10
Borax.
Pacific Coast Borax Company ... 80
Casters.
Faultless Caster Company ... 90
Jarvis & Jarvis ... 102
Catgut, Ligatures, etc.
Bigelow, Chapin & Young ... 81
Davis & Geck, Inc ... 29
Hollister-Ashland Laboratories ... 68
Johnson & Johnson ... 4
Meinecke & Co ... 32
Cereal Foods.
Rice Cereal and Milling Company ... 24
Shredded Wheat Company ... 10
Wheatena Company ... 41
Chairs (Invalid and Reclining).
Worthington Company ... 117
Chemicals.
Mallinckrodt Chemical Company ... 40
Neale Chemical Company ... 24b
Peerless Chemical Company ... 45
China (Vitrified Ware for Cooking).
Hall China Company ... 50a
Mohawk Clay Products Company ... 24b
Choppers (Meat and Vegetable).
Smith's Sons Company, John E ... 52
Cleansing Agents.
Calumet Tea and Coffee Company (Washing Powder) ... 35
Ford Company, J. B ... 94
Hygienic Products Company ... 46
Pacific Coast Borax Company ... 80
Standard Oil Company ... 95
Winkler & Bro., Isaac ... 27

Cocoa and Chocolate. Page
Calumet Tea and Coffee Company ... 35
Coffees.
Calumet Tea and Coffee Company ... 35
Construction Materials.
Associated Tile Manufacturers ... 18
Best Bros. Keene's Cement Company ... 106
Dahlstrom Metallic Door Company ... 113
Mississippi Wire Glass Company ... 74
Southern Cypress Manufacturers' Association ... 121
Vitrolite Company ... 28
Cooking Utensils.
Corning Glass Works ... 47
Hall China Company ... 50a
Mohawk Clay Products Company ... 24b
Triumph Manufacturing Company ... 99
Coolers.
McCray Refrigerator Company ... 82
Monroe Refrigerator Company ... 103
Cotton.
Lewis Manufacturing Company ... 76
Maplewood Mills ... 122
Dentifrices.
McKesson & Robbins ... 49
Pepsodent Company ... 122
Dishwashing Machines.
Blakeslee & Co., G. S ... 54
Bromley-Merseles Manufacturing Company, Inc ... 111
Burton Range Company ... 116
Fearless Dishwasher Company ... 57
Hamilton-Low Company ... 44
Disinfectant (Electrolytic Cells for Making).
Electro Chemical Company ... 19
Disinfectors.
American Sterilizer Company ... 4
Bernstein Manufacturing Company ... 22
Hospital Supply Company ... 1
Doors (Fireproof).
Dahlstrom Metallic Door Company ... 113
Domestic Science Tables.
Sheldon Company, E. H ... 81
Dumbwaiters.
Burdett-Rowntree Manufacturing Company ... 50
Sedgwick Machine Works ... 30
Electrical Appliances.
American Electrical Heater Company ... 112
Mueller & Co., V ... 110
Electric Lighting Equipment.
General Electric Company ... 25
Westinghouse Lamp Company ... 77
Elevators.
Sedgwick Machine Works ... 30
Enamel.
Bird & Company, J. A. & W ... 8
Boston Varnish Company ... 94
Calman & Co., Emil ... 14
Patek Brothers ... 93
Tousey Varnish Company ... 3d cover
Enameled Ware.
Hospital Supply Company ... 1
Meinecke & Company ... 32
Ether.
Albany Chemical Company ... 38
Mallinckrodt Chemical Works ... 40
Parke, Davis & Co ... 6
Squibb & Sons, E. R ... 2
Extension Apparatus.
Siebrandt, J. R ... 63
Fire Escape Devices.
Dow Wire and Iron Works ... 29
Vonnegut Hardware Company ... 21
Flavoring Extracts.
Calumet Tea and Coffee Company ... 35
Floor Covering.
Boyle & Co., Inc., Jno ... 119
Floor Dressings.
Calman & Co., Emil ... 14
Muller & Co., Franklyn R ... 116
Floors.
American Flooring Company ... 102
American Magnesia Products Company ... 108
Atlas Floor Company ... 104
Grueby Faience and Tile Company ... 111
Mas-Oleum Floor Manufacturing Company ... 42
Muller & Co., Franklyn R ... 116
Food Carriers.
Blakeslee & Co., G. F ... 91
Van Range Company, John ... 117

Continued on page 87.

Is a Baby's Life Worth Saving?

"From the earliest stages of Obstetrical practice the Physician or Surgeon has experienced the difficulties, too frequently resulting fatally, attending cases of children born with beating pulse, apparently normal and possessed of every faculty, yet unable to breathe, due to the failure of the lungs to assume their natural function. Vital statistics show a death rate of from four to five percent among 'new-born' infants, and approximately ninety percent of these deaths are due to suffocation or strangulation."

Our booklet, containing matter you should know, sent you on application. Let us tell you all about

THE BABY RESUSCITATOR

THE NATIONAL RESUSCITATING APPARATUS CO.

Manufacturers of Resuscitating and Anesthesia Apparatus

27 William Street New York City, U. S. A.

Direct from the still | Purified | Purified and aged

No. 1 No. 2 No. 3

These three bottles will be sent you to test

WE wish to make clear to medical superintendents and physicians the differences between the ordinary commercial brands of whisky and Cascade Whisky as we supply it for medicinal use. In order that you may observe this by test, we shall be glad to send you the three small samples illustrated here.

Sample No. 1 contains Cascade Whisky as it comes from the still. Sample No. 2 contains Cascade Whisky ***purified.*** Sample No. 3 contains Cascade Whisky as we put it on the market.

Cascade Whisky is a safe medicinal whisky for you to give your patients. It is standard and reliable.

Send post card for the samples

GEORGE A. DICKEL & COMPANY, *Distillers,* Nashville, Tenn.

DIRECTORY OF HOSPITAL SUPPLIES

Continued from page 85.

Food Products. Page
California Fruit Growers Exchange 101
Calumet Tea and Coffee Company 35
Coast Products Company 5
Florida Citrus Exchange 105
Hansen's Laboratory, Chr 84
Haserot Canneries Company 45
Rice Cereal and Milling Company 24
Royal Baking Powder Company 4th cover
Shredded Wheat Company 10
Waukesha Pure Food Company 39
Welch Grape Juice Company 9
Wheatena Company 41

Foods (Special).
Calumet Tea & Coffee Company (Brosia Meals). 35
Horlick's Malted Milk Company 23
Mellin's Food Company 19
Nestlé's Food Company 13

Freezers (Ice Cream).
Peerless Freezer Company 108

Fruit (Canned).
Coast Products Company 5

Fruit (Fresh).
California Fruit Growers Exchange 101
Florida Citrus Exchange 105

Fumigants.
Neale Chemical Company 24b
Peerless Chemical Company 45

Furniture.
Bernstein Manufacturing Company 22
Chicago Wire Chair Company 56
Columbus Aseptic Furniture Company 58
Dougherty & Co., H. D. 93
Hospital Supply Company 1
Inner-Braced Furniture Company 92
Moore Bros. 68
Richardson, Wright & Co 113
Smith & Davis Manufacturing Company 115
Watson Manufacturing Company 100

Furniture (Operating Room).
Hospital Supply Company 1
Wocher & Son Company, Max 108

Garbage Can.
Stephenson, C. H. 73

Gauze.
Johnson & Johnson 4
Lewis Manufacturing Company 76

Gelatine and Gelatine Desserts.
Calumet Tea and Coffee Company 35
Waukesha Pure Food Company 39

Glass Baking Dishes.
Corning Glass Works 47

Grape Juice.
Welch Grape Juice Company 9

Heating Devices (Electrical).
American Electrical Heater Company 112

Heating Systems.
American District Steam Company 64
Bishop-Babcock-Becker Company 59

Hospital Equipment (General).
Bernstein Manufacturing Company 22
Betz Company, Frank S 112
Mandel Brothers 92
Pick & Co., Albert 83

Hospital Equipment (Specialties).
Alsteel Manufacturing Company 84
American District Steam Company 64
Art Metal Construction Company 81
Bishop-Babcock-Becker Company 59
Cordley & Hayes 63
Eames Company 47
Hall & Sons, Frank A 117
Hospital Supply Company 1
Inner-Braced Furniture Company 92
McCray Refrigerator Company 83
Monroe Refrigerator Company 103
Moore Bros. 68
Mott Iron Works, J. L. 12
Never Split Seat Company 55
Richardson, Wright & Co 113
Security Window Guard Company 109
Simmons Company 31
Standard Medical Supply Company 112
Wocher & Son Company, Max 108
Worthington Company 117

Hospital Garments.
Angelica Jacket Company 23

Hospital Organization and Management. Page
Loder & Associates, Cornelius S. 44

Hospital Record Binders.
Hospital Standard Publishing Company 10

Hospital Supplies.
American Thermos Bottle Company 60
Hospital Supply Company 1
Johnson & Johnson 4
Kny-Scheerer Company 66, 67
Lentz & Sons, Chas 57
Lewis Manufacturing Company 76
Meinecke & Co. 32
Metropolitan Hospital Supply Company 56
Ostermoor & Co 53
Pick & Co., Albert 83
Reid Bros. 16a
Rhoads & Fillman 16
Sachs, Frederick J. 21
Sharp & Smith 116
Stanley Supply Company 17, 109
Wocher & Son Company, Max 108

Hot Water Bottles.
Davol Rubber Company 53
Dorchester Pottery Works 16
Reid Bros. 16a
Stanley Supply Company 17

Hydrotherapeutic Apparatus.
Mott Iron Works, J. L. 12

Ice Boxes.
Brecht Company 65
McCray Refrigerator Company 83

Ice Choppers.
Wharton, Jos. S. L. 113

Instruments (Diagnostic and Therapeutic).
Electro Surgical Instrument Company 37
McIntosh Battery and Optical Company 79
Mueller & Co., V. 110
Randall-Faichney Company, Inc. 96
Taylor Instrument Companies 102

Instruments (Surgical).
Bard-Parker Company, Inc. 91
Becton, Dickinson & Co. 88
Kny-Scheerer Company 66, 67
Lentz & Sons, Chas. 57
Sharp & Smith 116

Invalid Elevators.
Sedgwick Machine Works 30

Kitchen Equipment.
Blodgett Company, G. S. 76
Born Steel Range Company 16
Bromley-Merseles Manufacturing Company 111
Burton Range Company 115
Demmler & Schenck Company 30
Fearless Dishwasher Company 57
Hamilton-Low Company 44
Hall China Company 50a
Majestic Manufacturing Company 14
Read Machinery Company 21
Reinhold Manufacturing Company 79
Sheldon Company, E. H. 81
Smith's Sons Company, John E. 52
Triumph Manufacturing Company 99
Van Range Company, John 117

Laboratories (Analytical).
Columbus Laboratories 118

Laboratories (Pathological).
Mulford Company, H. K. 2d cover

Lamps (Electric).
Westinghouse Lamp Company 77

Laundry Chutes.
Pfaudler Company 24

Laundry Equipment.
American Ironing Machine Company 100
American Laundry Machinery Company 27
Con. Hospital Supply & Laundry Mach. Company 116
National Marking Machine Company 15
Prosperity Company, Inc. 41
Troy Laundry Machinery Company, Ltd. 122
Williamson Heater Company 57

Laundry Supplies.
Pacific Coast Borax Company 80
Stanley Laundry Supply Company 50b
Winkler & Bro., Isaac 27

Lighting Fixtures and Specialties.
General Electric Company 25
Luminous Unit Company 60
Pittsburgh Lamp, Brass and Glass Company 24
Scanlan-Morris Company 97
Westinghouse Lamp Company 77
Wirt Company 55

Continued on page 89.

The (Genuine) Lüer Syringe

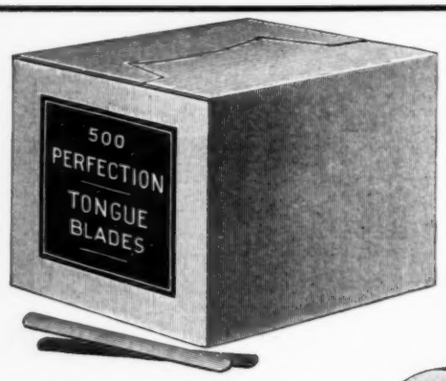
is made from a heat-treated glass that will not break when immersed in boiling water.

Another excellent feature is the (patented) "Spring Plunger Holder," which automatically holds the plunger at any point of graduation.

MADE BY

Becton, Dickinson & Co., Rutherford, N. J.

Makers of **B-D** *Fever Thermometers*



3 VALUABLE ACCESSORIES

FOR THE

HOSPITAL AND CLINIC

SPECIALLY MADE

Tongue Depressors, Applicators, and Splints

Perfection Tongue Depressors

Our Wooden Tongue Depressors are made of specially selected white wood, smoothly finished, and are very neat and clean in appearance. They save the doctor a great deal of time that is otherwise lost in sterilizing the metal tongue depressors, and are of special value where a large number of cases are examined. Packed 500 in a package.

Perfection Applicators

Our Wooden Perfection Applicators are the most practical article of this kind on the market, and give universal satisfaction. They are of two lengths—6 and 12 inches—and are put up in sealed sanitary packages.

Perfection Corrugated Splints

Our Perfection Corrugated Wooden Splints can be adjusted to any case. By being moistened before application, they can be easily bent around any fracture, and the corrugation permits perfect ventilation. These splints are 18 inches long by 3½ inches wide, and are put up in sealed packages, 12 splints to the package.

We also manufacture plain Basswood Splints in three thicknesses, 18 inches long by 3½ inches wide, 12 splints to the package.

Send for samples of these practical accessories

PERFECTION MANUFACTURING COMPANY Detroit, Mich.

DIRECTORY OF HOSPITAL SUPPLIES

Continued from page 87.

Linens. Page
Baker Linen Company, H. W. 59
Sachs, Frederick J. 21
Liquid Paraffin.
Squibb & Sons, E. R. 2
Standard Oil Company. 61
Lockers, Wardrobes, etc.
Art Metal Construction Company. 81
Betz Company, Frank S. 112
Terrell's Equipment Company. 104
Lumber.
Southern Cypress Manufacturers' Association. 121
Malt Preparations.
Anheuser-Busch Brewing Association. 114
Marking Machine (for Linens).
National Marking Machine Company. 15
Marking Tapes (for Linens).
Washable Name Tape Company. 58
Mattresses.
Bernstein Manufacturing Company. 22
Dixie Cotton Felt Mattress Company. 119
Ostermoor & Co. 53
Washtik Company. 49
Microscopes and Microtomes.
Spencer Lens Company. 78
Milk Dispensers and Receptacles.
Lyons Sanitary Urn Company. 47
Milk Products.
Borden's Condensed Milk Co. 15
Horlick's Malted Milk Company. 23
Mineral Waters.
Cèlestins Vichy. 74
Mixing Valve.
Hoffmann & Billings Manufacturing Company. 64
Mortuary Boxes.
Brecht Company. 65
Lorillard Refrigerator Company. 23
Nurses' Supplies.
Hays & Green. 46
Nurses' Outfitting Association. 80
Olive Oils.
Calumet Tea and Coffee Company. 35
Pompeian Company. 45
Operating Room Lights.
Scanlan-Morris Company. 97
Operating Tables and Table Pads.
Hospital Supply Company. 1
Kny-Scheerer Company. 66, 67
Wocher & Son Company, Max. 108
Oranges.
California Fruit Growers Exchange. 101
Florida Citrus Exchange. 105
Ovens.
Blodgett Company, G. S. 76
Paints and Varnishes.
Bird & Company, J. A. & W. 8
Boston Varnish Company. 94
Calman & Co., Emil. 14
Patek Brothers. 93
Tousey Varnish Company. 3d cover
Paper Balers.
Alsteel Manufacturing Company. 84
Pharmaceuticals.
Abbott Laboratories. 43
Hoffmann-La Roche Chemical Works. 9
Mulford Company, H. K. 2d cover
Parke, Davis & Co. 6
Squibb & Sons, E. R. 2
Physical Training.
Cocroft, Susanna. 96
Pituitary Liquid.
Parke, Davis & Company. 6
Plaster.
Best Bros. Keene's Cement Company. 106
Plumbing Fixtures.
Mott Iron Works, J. L. 12
Plumbing (Specialties).
Hoffmann & Billings Manufacturing Company. 64
Leonard-Rooke Company. 17
Powers Regulator Company. 40
Polishes.
Standard Oil Company. 95
Printing (Hospital).
Myerson Printing Company, Sam'l F. 106
Ranges.
Born Steel Range Company. 16
Burton Range Company. 115
Majestic Manufacturing Company. 14
Van Range Company, John. 117
Record Systems. Page
Burkhardt Company. 54
Physicians' Record Company. 37
Refrigerators.
Brecht Company. 65
McCray Refrigerator Company. 83
Monroe Refrigerator Company. 103
Refrigerating Machinery.
Brecht Company. 65
Kroeschell Bros. Ice Machine Company. 59
Restraint Apparatus.
National Hospital Bureau, Inc. 68
Resuscitating Devices.
Draeger Oxygen Apparatus Company (Pulmotor) 69
Life Saving Devices Company. 63
National Resuscitating Apparatus Company. 86
Rubber Gloves and Goods.
Davol Rubber Company. 53
E. Z. Patch Company. 8
Lincoln Rubber Company. 115
Stanley Supply Company. 109
Underdown's Sons, A. R. 38
Rubber Heels.
Foster Rubber Company. 62
I. T. S. Rubber Company. 29
O'Sullivan Rubber Company. 100
Safety Pins.
Consolidated Safety Pin Company. 109
Sanatoriums.
Battle Creek Sanatorium. 71
Lake Geneva Sanitariums. 73
Moody's Sanitarium, Dr. 72
Oconomowoc Health Resort. 73
Sacred Heart Sanitarium. 72
Towns Hospital, Chas. B. 70
Waldheim Park. 72
Waukesha Springs Sanitarium. 72
Scales (Bath).
Mason, Davis & Company. 19
Screens.
Watson Manufacturing Company. 100
Serums and Vaccines.
Mulford Company, H. K. 2d cover
Sheets and Sheeting (Cotton).
Bliss, Fabyan & Company. 30
Utica Steam and Mohawk Valley Cotton Mills. 92
Sheets and Sheeting (Waterproof).
Archer Rubber Company. 14
Lewis Manufacturing Company. 76
Meinecke & Co. 32
Metropolitan Hospital Supply Company. 56
Ostermoor & Co. 53
Rosenwald & Weil. 99
Stanley Supply Company. 109
Underdown's Sons, A. R. 38
Signal and Call Systems.
Bryant Electric Company. 20
Chicago Signal Company. 74
Holtzer-Cabot Electric Company. 17
Relay Signal Company. 96
Soaps (Surgical and Toilet).
Johnson & Johnson. 4
Soda (Laundry).
Winkler & Bro., Isaac. 27
Spices.
Calumet Tea and Coffee Company. 35
Splints.
Perfection Manufacturing Company. 88
Sputum Cups (Paper).
Meinecke & Company. 32
Sterilizers.
American Sterilizer Company. 4
Bernstein Manufacturing Company. 22
Betz Company, F. S. 112
Hospital Supply Company. 1
Northwestern Steel and Iron Company. 99
Santiseptic Manufacturing Company. 90
Standard Medical Supply Company. 112
Sterilizer Controller Valve.
Powers Regulator Company. 40
Stretchers.
Bernstein Manufacturing Company. 22
Bomgardner Manufacturing Company. 36
Hospital Supply Company. 1
Surgical Dressings.
Johnson & Johnson. 4
Reid Bros. 24a

Continued on page 91.

SPECIFY FAULTLESS CASTERS

They are guaranteed to give

SATISFACTION

and there are 2,500 different styles from which to make your selection. Each one of these 2,500 were instrumental in securing the Gold Medal, Highest Award, at the Panama Pacific International Exposition in 1915 on "Furniture Casters of All Types."

Their quality and easy movement will convince you

Manufactured by

FAULTLESS CASTER COMPANY

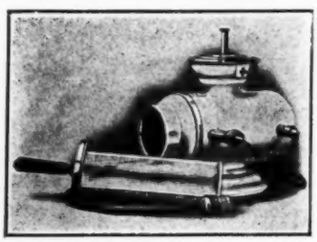
Evansville, Indiana

FIGURES *speak* *FACTS* *convince*

THE PENTZ SYSTEM

of sterilization is the QUICKEST and MOST EFFICIENT method of sterilizing instruments and loose dressings known.

As proof of our claim, we call your attention to the following report of ACTUAL TESTS made with one of our machines.



Technic of Bacteriological Test

In all cases the organisms were smeared on small pieces of glass rod and allowed to dry at room temperature.

A. The pieces of glass smeared with bacteria were dropped into the receiving tray, the bacteria thus being directly exposed.

B. The pieces of glass were placed in the center of a package of 4 gauze sponges, loosely wrapped with one layer of cotton cloth.

C. Similar to B, except that the sponges were rolled tight, and firmly wrapped in many layers of cotton cloth, making a package 5 inches in length by 1¾ inches in diameter, as large as the instrument would hold.

Time	S. Aureus	Streptoc.	Colon	B. Lactis Albus	B. Subtils
A.					
10 seconds	No growth	No growth	Growth	Growth	Growth
15 seconds	No growth	No growth	No growth	Growth	Growth
20 seconds	No growth	No growth	No growth	Growth	Growth
30 seconds	.....	.....	.....	No growth	No growth
1 minute	.....	.....	.....	No growth	No growth
2 minutes	.....	.....	.....	No growth	No growth
3 minutes	.....	.....	.....	No growth	No growth
Control	Growth	Growth	Growth	Growth	Growth
B.					
10 seconds	Growth	.....	Growth	.....	.....
15 seconds	No growth	.....	No growth	.....	.....
30 seconds	No growth	.....	No growth	.....	.....
1 minute	No growth	.....	No growth	.....	.....
Control	Growth	.....	Growth	.....	.....
C.					
10 seconds	Growth	.....	Growth	.....	.....
15 seconds	Growth	.....	Growth	.....	.....
30 seconds	No growth	.....	No growth	Growth	Growth
1 minute	No growth	.....	No growth	Growth	Growth
2 minutes	.....	.....	.....	No growth	No growth
3 minutes	.....	.....	.....	.....	No growth
5 minutes	.....	.....	.....	.....	No growth
7 minutes	.....	.....	.....	.....	No growth
10 minutes	.....	.....	.....	.....	No growth
Control	Growth	.....	Growth	Growth	Growth

We would like to send you our ILLUSTRATED BOOKLET giving additional bacteriological tests and testimonials, with other information and particulars

WRITE US OR YOUR DEALER

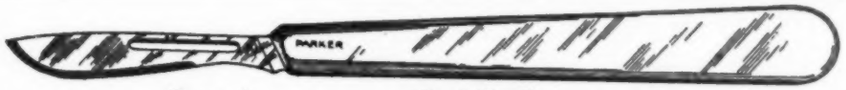
THE SANTISEPTIC MFG. CO.

Tompkinsville, Staten Island New York City

DIRECTORY OF HOSPITAL SUPPLIES

Continued from page 89.

	Page
Surgical Sutures.	
Davis & Geck, Inc.	29
Hollister-Ashland Laboratories	68
Johnson & Johnson	4
Meinecke & Co.	32
Syringes and Needles (Hypodermic).	
Becton, Dickinson & Co.	88
Randall-Faichney Company, Inc.	96
Talcum Powder.	
Mennen Chemical Company, Gerhard	82
Teas.	
Calumet Tea and Coffee Company	35
Temperature Control Device (Water).	
Leonard-Rooke Company	17
Powers Regulator Company	40
Sarco Company, Inc.	48
Thermometers (Clinical).	
Becton, Dickinson & Company	88
Thermos Bottles.	
American Thermos Bottle Company	60
Tile.	
Associated Tile Manufacturers	18
Grueby Faience and Tile Company	111
Toilet Seats.	
Never Split Seat Company	55
Toilet Specialties.	
Mennen Chemical Company, Gerhard	82
Trucks (Laundry).	
Lane & Bro., W. T.	110
Vegetable Parers.	
Blakeslee & Co., G. S.	54
Reinhold Manufacturing Company	79
Waste Paper Balers.	
Alsteel Manufacturing Company	84
Water Closet Cleanser.	
Hygienic Products Company	46
Water Coolers.	
Cordley & Hayes	63
Water Softening Apparatus.	
Permutit Company	11
Water Temperature Control.	
Leonard-Rooke Company	17
Powers Regulator Company	40
Sarco Company, Inc.	48
Wheels (Rubber-tired).	
Jarvis & Jarvis	102
Whisky (Medicinal).	
Dickel & Co., Geo. A.	86
Window Guards.	
Security Window Guard Company	109
Window Shades.	
Draper Shape Company, Luther O.	64
Wines.	
American Wine Company	51
Wire Glass.	
Mississippi Wire Glass Company	74
X-Ray Apparatus.	
Kelley-Koett Manufacturing Company	79
McIntosh Battery and Optical Company	79
Meyer Company, Wm.	78
Wappler Electric Company	79
X-Ray Plates.	
American Photo Chemical Company	26
Eastman Kodak Company	75
X-Ray Tubes.	
Kesselring X-Ray Tube Company	78



Patented No. 1 Handle

Stop the *complaint* about dull Knives by furnishing your *Surgeons* with the always sharp

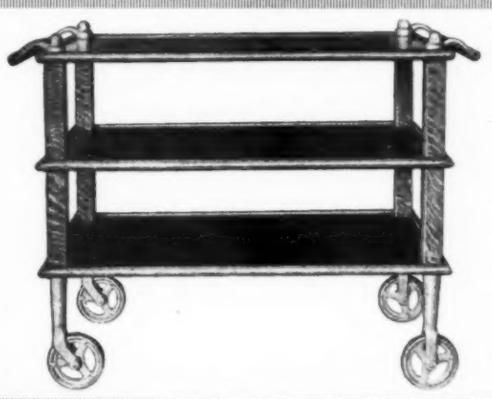
BARD-PARKER

DETACHABLE RAZOR BLADE OPERATING KNIVES

2 sizes of handles, $1.00 each 4 sizes of blades, $1.50 dozen

If not at your dealer's, we ship direct

BARD-PARKER COMPANY, Inc., 37 East 28th Street, NEW YORK



The Blakeslee Food Carrier

IN use by some of the largest SCHOOLS, COLLEGES, HOSPITALS, SANATORIUMS, and other PUBLIC INSTITUTIONS of the Country.

We manufacture these and other styles for handling food, dishes, and supplies, and will be glad to send detailed information on request.

G. F. BLAKESLEE & CO. **Kansas City, Mo.**

SPECIFY FAULTLESS CASTERS

They are guaranteed to give

SATISFACTION

and there are 2,500 different styles from which to make your selection. Each one of these 2,500 were instrumental in securing the Gold Medal, Highest Award, at the Panama Pacific International Exposition in 1915 on "Furniture Casters of All Types."

Their quality and easy movement will convince you

Manufactured by

FAULTLESS CASTER COMPANY

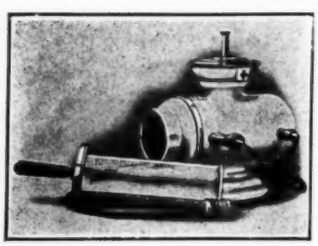
Evansville, Indiana

FIGURES *speak* *FACTS* *convince*

THE PENTZ SYSTEM

of sterilization is the QUICKEST and MOST EFFICIENT method of sterilizing instruments and loose dressings known.

As proof of our claim, we call your attention to the following report of ACTUAL TESTS made with one of our machines.



Technic of Bacteriological Test

In all cases the organisms were smeared on small pieces of glass rod and allowed to dry at room temperature.

A. The pieces of glass smeared with bacteria were dropped into the receiving tray, the bacteria thus being directly exposed.

B. The pieces of glass were placed in the center of a package of 4 gauze sponges, loosely wrapped with one layer of cotton cloth.

C. Similar to B, except that the sponges were rolled tight, and firmly wrapped in many layers of cotton cloth, making a package 5 inches in length by 1¾ inches in diameter, as large as the instrument would hold.

Time	S. Aureus	Streptoc.	Colon	B. Lactis Albus	B. Subtils
A.					
10 seconds	No growth	No growth	Growth	Growth	Growth
15 seconds	No growth	No growth	No growth	Growth	Growth
20 seconds	No growth	No growth	No growth	Growth	Growth
30 seconds	.....	.....	.....	No growth	No growth
1 minute	.....	.....	.....	No growth	No growth
2 minutes	.....	.....	.....	No growth	No growth
3 minutes	.....	.....	.....	No growth	No growth
Control	Growth	Growth	Growth	Growth	Growth
B.					
10 seconds	Growth	.....	Growth	.....	.....
15 seconds	No growth	.....	No growth	.....	.....
30 seconds	No growth	.....	No growth	.....	.....
1 minute	No growth	.....	No growth	.....	.....
Control	Growth	.....	Growth	.....	.....
C.					
10 seconds	Growth	.....	Growth	.....	.....
15 seconds	Growth	.....	Growth	.....	.....
30 seconds	No growth	.....	No growth	Growth	Growth
1 minute	No growth	.....	No growth	Growth	Growth
2 minutes	.....	.....	.....	No growth	No growth
3 minutes	.....	.....	.....	.....	No growth
5 minutes	.....	.....	.....	.....	No growth
7 minutes	.....	.....	.....	.....	No growth
10 minutes	.....	.....	.....	.....	No growth
Control	Growth	.....	Growth	Growth	Growth

We would like to send you our ILLUSTRATED BOOKLET giving additional bacteriological tests and testimonials, with other information and particulars

WRITE US OR YOUR DEALER

THE SANTISEPTIC MFG. CO.

Tompkinsville, Staten Island New York City

DIRECTORY OF HOSPITAL SUPPLIES

Continued from page 89.

	Page
Surgical Sutures.	
Davis & Geck, Inc.	29
Hollister-Ashland Laboratories	68
Johnson & Johnson	4
Meinecke & Co.	32
Syringes and Needles (Hypodermic).	
Becton, Dickinson & Co.	88
Randall-Faichney Company, Inc.	96
Talcum Powder.	
Mennen Chemical Company, Gerhard	82
Teas.	
Calumet Tea and Coffee Company	35
Temperature Control Device (Water).	
Leonard-Rooke Company	17
Powers Regulator Company	40
Sarco Company, Inc.	48
Thermometers (Clinical).	
Becton, Dickinson & Company	88
Thermos Bottles.	
American Thermos Bottle Company	60
Tile.	
Associated Tile Manufacturers	18
Grueby Faience and Tile Company	111
Toilet Seats.	
Never Split Seat Company	55
Toilet Specialties.	
Mennen Chemical Company, Gerhard	82
Trucks (Laundry).	
Lane & Bro., W. T.	110
Vegetable Parers.	
Blakeslee & Co., G. S.	54
Reinhold Manufacturing Company	79
Waste Paper Balers.	
Alsteel Manufacturing Company	84
Water Closet Cleanser.	
Hygienic Products Company	46
Water Coolers.	
Cordley & Hayes	63
Water Softening Apparatus.	
Permutit Company	11
Water Temperature Control.	
Leonard-Rooke Company	17
Powers Regulator Company	40
Sarco Company, Inc.	48
Wheels (Rubber-tired).	
Jarvis & Jarvis	102
Whisky (Medicinal).	
Dickel & Co., Geo. A.	86
Window Guards.	
Security Window Guard Company	109
Window Shades.	
Draper Shade Company, Luther O.	64
Wines.	
American Wine Company	51
Wire Glass.	
Mississippi Wire Glass Company	74
X-Ray Apparatus.	
Kelley-Koett Manufacturing Company	79
McIntosh Battery and Optical Company	79
Meyer Company, Wm.	78
Wappler Electric Company	79
X-Ray Plates.	
American Photo Chemical Company	26
Eastman Kodak Company	75
X-Ray Tubes.	
Kesselring X-Ray Tube Company	78

Patented No. 1 Handle

Stop the *complaint* about dull Knives by furnishing your *Surgeons* with the always sharp

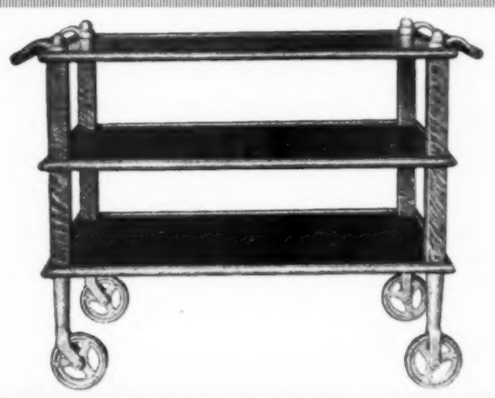
BARD-PARKER

DETACHABLE RAZOR BLADE OPERATING KNIVES

2 sizes of handles, $1.00 each 4 sizes of blades, $1.50 dozen

If not at your dealer's, we ship direct

BARD-PARKER COMPANY, Inc., 37 East 28th Street, NEW YORK



The Blakeslee Food Carrier

IN use by some of the largest SCHOOLS, COLLEGES, HOSPITALS, SANATORIUMS, and other PUBLIC INSTITUTIONS of the Country.

We manufacture these and other styles for handling food, dishes, and supplies, and will be glad to send detailed information on request.

G. F. BLAKESLEE & CO. **Kansas City, Mo.**

Hospital equipment a Mandel specialty

—a specialty popularized by modern methods perfected through a constant, expert study of hospital requirements.

Hospitals we have outfitted:

Michael Reese Hospital, Chicago—complete.
German Hospital, Chicago—complete.
Lake View Hospital, Chicago—complete.
Jefferson Park Hospital, Chicago—complete.
Maimonides Hospital, Chicago—complete.
Durand Memorial Hospital, Chicago—complete.
West Side Hospital, Chicago—partially.
North Chicago Hospital, Chicago—partially.

As interior decorators, too, we have been accorded remarkable prestige because of our success in decorating public buildings throughout the United States. Write for suggestions and estimates.

Featured lines:

Hospital beds	Pillows
Mattresses	Dressers
Chiffoniers	Chairs
Bedside tables	Rockers
Room tables	Rugs
Bed linen	Carpets
Table linen	Linoleums
Nurses' uniforms	Curtains
Caps	Shades
Operating gowns	Screens
	China
Kitchen ranges	Glass-
Refrigerators	ware, etc.

Adjustable bed lamps
Reception room and office furniture

MANDEL BROTHERS—Chicago

This label guarantees quality

Established 1848. Times change, but "Utica" remains a Standard

UTICA Sheets and Pillow Cases

are especially adapted to the needs of Hospitals, Sanatoriums, and other institutions because the Utica fabric is woven of only selected staple cotton—strong and well suited to frequent laundering and steam sterilization.

Utica Sheets and Pillow Cases are made in all sizes, laundered, put up in dust-proof packages ready for use.

Sold by dry goods stores everywhere

Our "Mohawk" brand is a good sheet, not quite so heavy as "Utica."

UTICA STEAM and MOHAWK VALLEY COTTON MILLS :: :: Utica, N. Y.

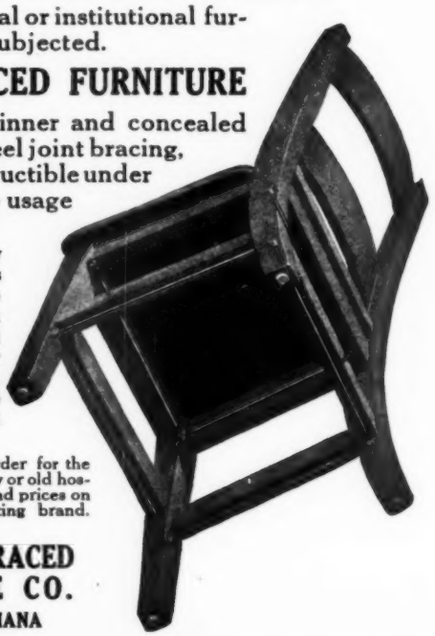
Withstands

the most severe conditions

to which hospital or institutional furniture may be subjected.

INNER-BRACED FURNITURE

because of its inner and concealed steel rod and steel joint bracing, is almost indestructible under the most severe usage or conditions.



It is **unconditionally guaranteed for ten years** not to have a loose stretcher or box seat rail, and will outlast any other brand of wooden furniture on the market at an equal or higher price.

Before placing your order for the new furniture in that new or old hospital, write for catalog and prices on this practically everlasting brand. Write

THE INNER-BRACED FURNITURE CO.
ELKHART, INDIANA

PATEK'S
Egshelcote

A Permanent, Elastic, Washable, Dull Finish Oil Paint Containing No White Lead

The hard, non-porous surface offers no lodgment for germ-laden dust particles.

Egshelcoted walls are sanitary, and the hard, non-porous surface can be scrubbed like tile. Finger prints, match scratches, blood stains, spots of any kind are easily washed off. Egshelcote is a permanent, non-fading finish, and its use in hospitals solves the painting problem.

USED NATIONALLY IN HOSPITALS
WITH SATISFACTORY RESULTS

FREE TRIAL—A sufficient quantity to make a thorough test will be sent to hospitals gratis on request. Write for interesting literature and sample panel.

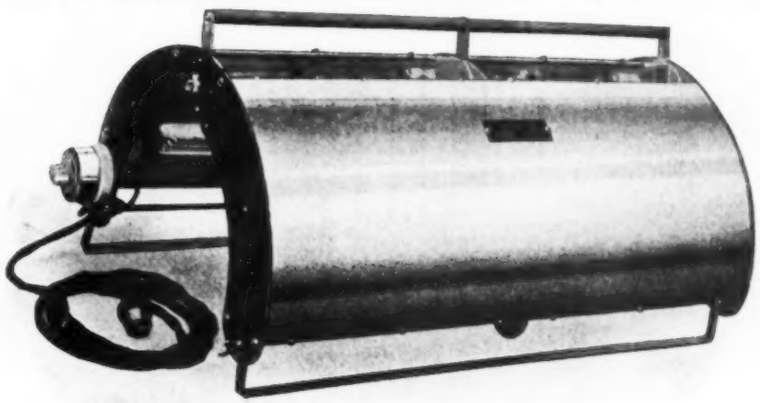
Patek Brothers Paint Makers **Milwaukee**

H. D. DOUGHERTY & CO., Inc.
"FAULTLESS" Aseptic Hospital Equipment
17th Street and Indiana Avenue
PHILADELPHIA

No. 4740

Single Form Arm Immersion Stand; steel tubular oxy-acetylene welded frame; finished in white enamel; mounted on 1½-inch rubber wheels; heavy glass tank, with rounded bottom.

EDMANDS ELECTRIC BAKERS



(Patented)

For the application of radiant heat.

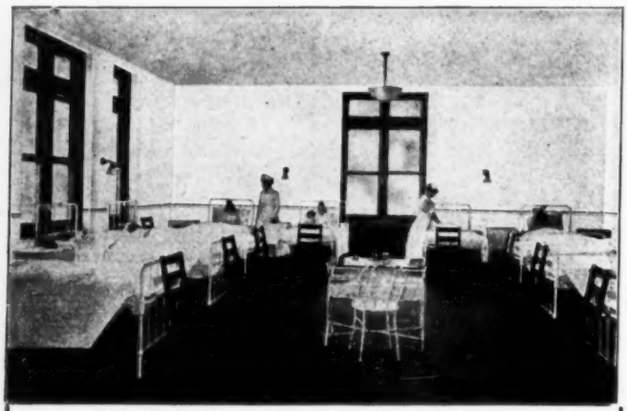
The apparatus is adjustable, and is made in various sizes for the treatment of any part or the whole of the body.

The heat is instantly controlled and regulated. No danger from fire or explosion, or overheating adjacent parts to that being treated.

Special apparatus made to order.

WALTER S. EDMANDS

Sole Manufacturer **BOSTON, MASS.**



SPOTLESSLY CLEAN
THAT CLEANS SPOTLESSLY

Dirt — germ — stain must not find abiding place within hospital walls.

The best white enamel made, the enamel with the toughest, most elastic, impervious glass-like surface is the only enamel for hospital requirements.

For the operating theatre, laboratory, laundry, kitchens, wards, offices the durable wearing qualities of

Kyanize
KY-AN-IZE

WHITE ENAMEL

are essential. On wood, metal or plaster, Kyanize can easily be kept clean with a damp cloth — always asceptic and positively clean.

Kyanize White Enamel has great covering capacity which makes it most economical. It does not leave brush mark or lap and it dries hard as steel. These are the qualities which make Kyanize the perfect hospital enamel.

Specification Booklet, "How to Use Kyanize White Enamel" with sample panel and trial can of enamel, sent free on request.

We also make the celebrated Kyanize Floor Finishes.

BOSTON VARNISH COMPANY
Everett Station, Boston, U. S. A.

Chicago Warehouse and office
519 West Twelfth St.

San Francisco Warehouse and office
311 California St

Leadership

Leadership imposes great responsibilities, and can be maintained only at the price of eternal vigilance and progress.

For many years

"Wyandotte" Yellow Hoop

has maintained this position with the laundry owners, despite the many would-be contenders who from time to time rise to challenge its position.

If you, Mr. Hospital or Institution Superintendent, have a laundry department, this thought, if acted on, will give you results far-reaching in their consequences.

In cost "Wyandotte," Yellow Hoop is a money saver. In washing it is a clothes saver. In cleansing it is a producer of sanitary conditions. Combining, as it does, these three results, the cause of its pre-eminence is as an open book.

Order from your supply house. A booklet of washroom recipes and directions sent free on request.

The J. B. Ford Co.

Sole Manufacturers
Wyandotte, Mich.

This Soda has been awarded the highest prize wherever exhibited

Semdac Liquid Gloss

(A Superior Polish)

Cleans Finished Surfaces Better Than Soap and Water

and in one-half the time.

Soap and water dulls the finish.

Semdac does not mar the finish. It polishes as well as cleans—removing every bit of grime—all in one operation. It restores original brightness to all finished surfaces.

Semdac functions in a manner of signal importance to Hospital Superintendents.

Applied with a cloth, it collects dust without scattering it.

Results are gauged frequently by the cost of achievement. Semdac not only keeps down the dust but the cost as well.

Made and guaranteed by

Standard Oil Company

(Indiana)

72 W. Adams St. Chicago, Ill. 53

Psycho-Physical Therapy

The busy physician often finds his time unduly taken up by patients, who should be made to know that they are first aids to the physician in accomplishing their cure.

Every physician recognizes the absolute value of psycho-physical therapy as an adjunct to the medicinal treatment.

It is in such cases that Miss Susanna Cocroft can be of great assistance to the physician. Being a woman, she understands her sex as a man, however gifted, cannot. As a trained woman, both by study and by years of experience, she is able to combine the force of suggestion and her pupil's physical effort in exercise, deep breathing, and correct poise. She thus arouses these women to help themselves. She enthuses them in building up their physical resistance and thus aids in establishing their mental equilibrium.

Miss Cocroft inspires her pupils to "hold on" in practicing her special exercises for developing physical resistance, for reducing excess flesh or in building flesh, and this persistence of the patient herself in accomplishing results aids her recovery. Each case is individual and is so studied.

Miss Cocroft is in thorough sympathy with the ethics of the medical profession, and is cooperating with physicians in cases wherein physical exercises are of benefit.

Every practitioner should acquaint himself with the system of exercises ORIGINATED by Miss Cocroft. They are based on an extensive experience and a thorough anatomic and physiologic knowledge.

On request she will send you full information concerning her work. Address

SUSANNA COCROFT

624 MICHIGAN BOULEVARD CHICAGO

RANFAC PERFORATED-METAL SPLINTS

Indestructible
Conformable
Light
Ventilating
Cool
Sterilizable
Non-absorptive
Perfect Fitting

FOR ADULTS, CHILDREN, and INFANTS

ALL RANFAC PERFORATED-METAL SPLINTS are made regularly in "Adults" and "Childrens" sizes and a number of them are also made in "Infants" size, so that every possible size of limb can be properly fitted. They are made in **twenty-five different forms,** known by numbers for convenience, and they include every possible fracture or injury to the limbs. They are also made for right and left limbs, wherever such distinction applies.

They are put up, when desired, in carefully chosen sets of **eleven, twenty-one, twenty-nine, thirty-two, forty,** and complete **seventy-five pieces,** each set packed in a neat wooden case.

Each form of splint can be bought separately in any size, and for right or left when such applies. A set of any one form in all its sizes and right and left is also procurable. The assorted sets consist of selected splints in the several sizes for which there is most demand.

Write us for Catalog A and please give your dealer's name.

The Randall-Faichney Co., Inc.

Instrument Makers

76 Atherton St., Jamaica Plain BOSTON

Silent Call System

FOR CALLING NURSES

We were the pioneers and always will be. This system completely installed COSTS LESS than the bare apparatus of other signal systems.

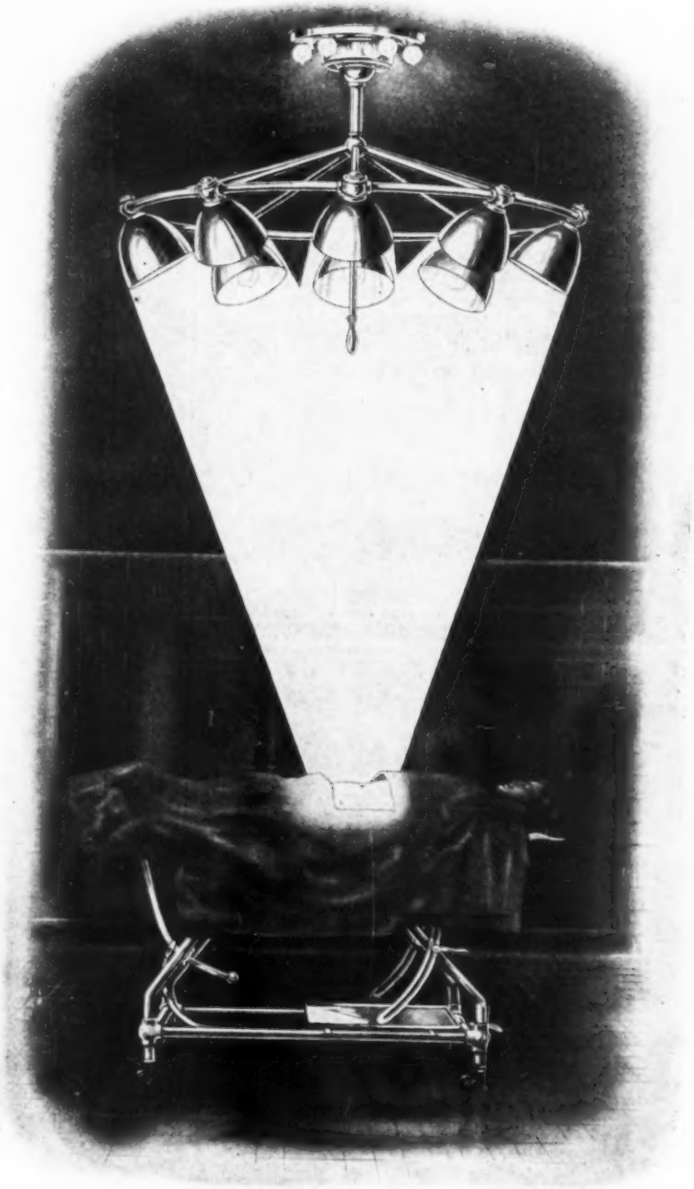
It is positive.	It is economical.
It cannot fail.	No upkeep charges.
It cannot get out of order.	No springs.
	No transformers.
It is quiet.	No motor generators.

Approved by the National Board of Underwriters. Write for pamphlet, wiring diagrams, and specifications.

THE ONE PERFECT SIGNAL SYSTEM
Installed in over 200 Modern Hospitals

MADE BY
RELAY SIGNAL CO.
116 S. MICHIGAN AVE. CHICAGO.

THE BARTLETT
No-Shado Operating Room Lite



All shadows are eliminated from the field of operation

A lighting fixture for the Operating Room that positively eliminates all shadows from the operating field.

The light rays from this fixture, meeting at an angle of 45 degrees on the operating field, make possible the visual examination of deep wounds.

The Bartlett No-Shado Lite has proven a revelation in operating room illumination.

A few of the many hospitals whose surgeons are finding the Lite a source of great convenience are:

St. Mary's Hospital (Mayo Clinics), Rochester, Minn.

St. Anthony's Hospital, St. Louis, Mo.

Toronto General Hospital, (Shields Emergency), Toronto, Ontario

New Haven Hospital, New Haven, Conn.

Washington Boulevard Hospital, Chicago, Ill.

Robert Packer Hospital, Sayre, Pa.

West Suburban Hospital, Oak Park, Ill.

Write to us for Monograph "C"—"The Bartlett No-Shado Lite"

SCANLAN-MORRIS COMPANY

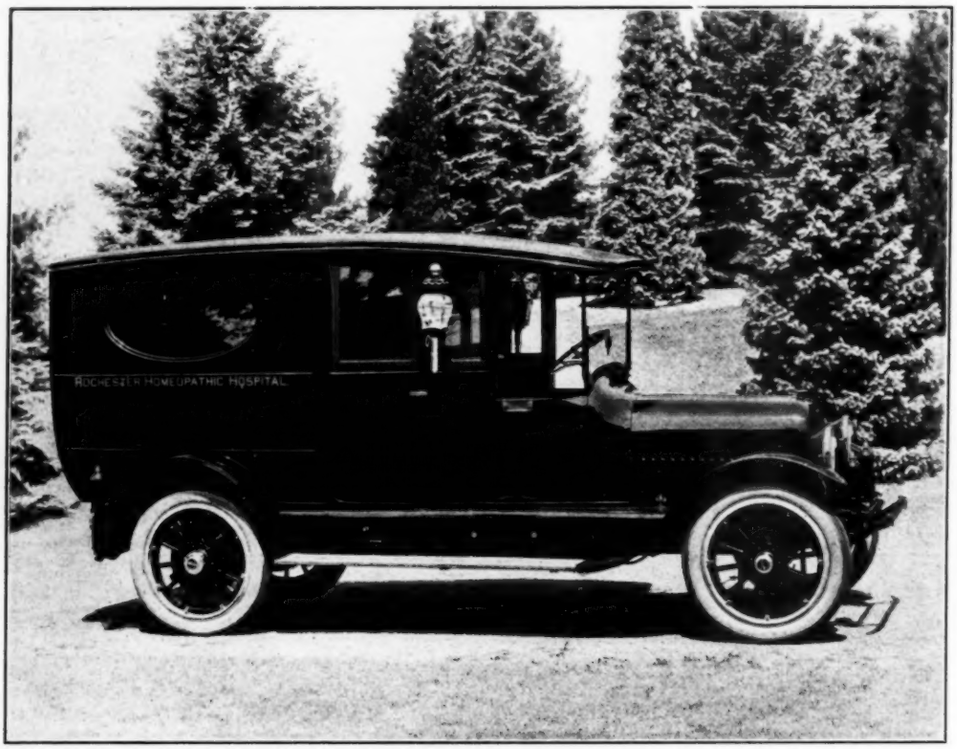
Manufacturers of

"THE WHITE LINE" Hospital Furniture and Sterilizing Apparatus

MADISON, WISCONSIN, U. S. A.

"Built to maintain a reputation of 75 years"

Of course you are interested



STYLE No. 6-A

Ambulances designed for your special needs, insuring the greatest possible comfort in riding, accessibility in loading, which, together with the low cost of upkeep, easily place the CUNNINGHAM Ambulances in the lead.

JAMES CUNNINGHAM, SON & CO.

Factory, ROCHESTER, NEW YORK

Branches:

NEW YORK CHICAGO BOSTON BALTIMORE ST. LOUIS

Established in 1838

THE dye shortage has not touched the quality of Imperial Rubber Sheeting.

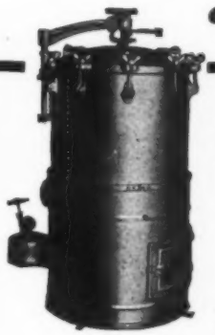
Imperial RUBBERIZED

Order "Imperial," maroon, tan, or black, and you get the same guarantee of fast color today as heretofore.

These colored "Imperial" sheetings, as well as "Imperial" Snow White, are all guaranteed to stand rigorous sterilization, and to be unaffected by alkaline or saline solutions, or dry heat.

Send for sample *Sold only through jobbers*

ROSENWALD & WEIL
Rubberizing Plant
1514-24 West Kinzie Street CHICAGO



"NATIONAL"

Save Money on Your Sterilizer Equipment

The low price—$50 to $125—of the "National" High Pressure Sterilizer makes it worth careful consideration before ordering Sterilizing Equipment for a new hospital.

10-DAY FREE TRIAL

It is approved for U. S. Army use. Two recent orders were from the Red Cross Society of Paris and the Foreign Mission Society for use in Korea.

Fill out the coupon below and get full information before you buy.

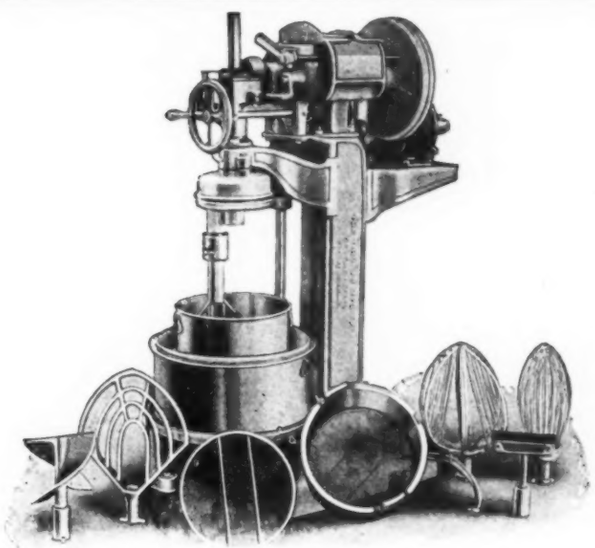
Northwestern Steel and Iron Works
691 Spring Street **EAU CLAIRE, WIS.**

FILL OUT—CUT OUT—MAIL

Northwestern Steel and Iron Works,
691 Spring Street, Eau Claire, Wis.

Gentlemen: Please send full information about "National" Sterilizers as advertised in "The Modern Hospital."

Name .....
Street .....
City .....State.....



The question of dietetics and proper preparation of food is now regarded as vital to recovery as any other feature of treatment.

The Triumph Kitchen Machine offers its help toward the accomplishment of this—as an endless variety of delicacies can be made with it.

Write us for full particulars on this Kitchen Machine.

We also manufacture a full line of machinery for the Hospital Bake Shop.

THE TRIUMPH MANUFACTURING COMPANY

3400-08 Spring Grove Avenue **CINCINNATI, OHIO**

WATSON

20th Century "Rewirable"

The Fly Outside

FOR WINDOWS FOR DOORS

INSECT SCREENS

Short Talks With Architects—
No. 6—"The Value of Comparison."

It might be difficult to decide which is the second best screen, or which is the third best—but among well posted architects there is no question as to which screen ranks first. The WATSON TWENTIETH CENTURY SCREEN is the acknowledged leader because it is a better screen, point for point, than any other screen on the market. Not only is it superior to all others, but you will find upon comparison that our improvements have progressed from where other manufacturers have stopped content. Write for the Watson literature.

Watson Manufacturing Company
Jamestown, New York

Clean Linen in Abundance! Less Cost

The Simplex irons all flat work in ***one fourth*** the time of hand ironing and at a material saving of actual expense.

A great labor saver. One girl with a Simplex can do the work of four experienced hand workers when the

SIMPLEX IRONER
"THE BEST IRONER"

is used. No upkeep. Noiseless. Efficient. Sizes to suit any hospital up to 150 beds. Cost is quickly ***saved!***

Write ***today*** for complete information, catalog, etc.

American Ironing Machine Company
530-168 N. Michigan Ave.
CHICAGO, ILLINOIS

O'Sullivan's HEELS

of Live Rubber

Prevent Excessive Fatigue and Backache

Nature's pad under the calcaneum is insufficient to prevent the shock produced by walking on hard floors or sidewalks. It must be reinforced—cushioned

This is exactly what is done in wearing heels of new live rubber. The jar is avoided, the reflex muscular tension is relieved, and walking takes on new comfort and ease. Thousands of physicians who have proven the value of rubber heels from their own experience are therefore making it a routine practice to recommend them for their weak, debilitated, and nervous patients.

Regularly wearing O'Sullivan's Heels of new live rubber means a gratifying relief from "foot soreness," a lessening of fatigue, a reduction of the jar produced by walking on hard, unyielding surfaces, and a notable avoidance of the nervous irritation that all too often lays the foundation for many diseases.

O'SULLIVAN RUBBER CO., 131 Hudson Street, NEW YORK CITY

Orange Recipes

for the Sick Room

from *"Practical Dietetics"* by A. F. Pattee

Fruitade, 45 Calories

½ cup grated pineapple
Juice ½ orange
Juice ½ lemon
1 cup boiling water
Sugar

Orange Ice, 252 Calories
(individual rule)

½ cup water
Juice 1½ oranges
1 tablespoon lemon juice
¼ cup sugar

Mix together all the ingredients and freeze in small pan according to general directions.

Orange Sauce, 136 Calories
(three servings)

Beat white of one egg very light, add two tablespoons sugar gradually, beating constantly, then add one and one-half tablespoons orange juice and one teaspoon lemon juice.

Orange Bread Pudding, 710 Calories
(two servings)

1 cup stale bread
½ cup milk
2 eggs
2 oranges
Sugar to taste

Soak bread in the milk until soft and beat lightly with fork; add the grated rind of one orange and the juice of both; sweeten. Beat the whites very light and add to above mixture. Pour into custard cups and cook as for baked custard—about 15 or 20 minutes. Serve plain or with hard sauce. Omit orange rind if it interferes medicinally.

W. Gilman Thompson, M. D., in his book on dietetics sums up the use and properties of fruit as follows:

To furnish nutriment.

To convey water to the system and relieve thirst.

To introduce various salts and organic acids which improve the quality of the blood and react favorably upon the secretions.

As anti-scorbutics.

As diuretics, and to lessen the acidity of the urine.

As laxatives and cathartics.

To stimulate the appetite, improve digestion, and give variety to the diet.

Sunkist

Uniformly Good Oranges

Sunkist Oranges are packed and shipped by the California Fruit Growers Exchange, the world's largest *co-operative, non-profit* organization of fruit growers.

Sunkist Oranges are *uniformly good, and fresh,* the year 'round.

They are practically seedless and always juicy and tart.

Is it not worth while in buying for the hospital to secure this *dependable* fruit, since all first-class dealers sell it and it costs no more than ordinary kinds?

California Fruit Growers Exchange
A Co-operative, Non-profit Organization of 8,000 Growers
Dept. M-24, Los Angeles, Cal.

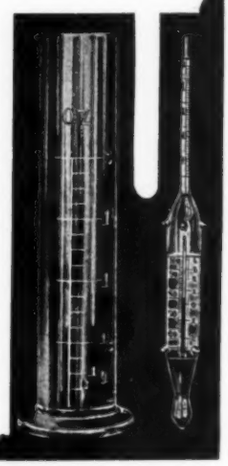
3 *Tycos* Medical Instruments
Worthy of Your Consideration

Dr. Rogers' *Tycos* Self-Verifying Sphygmomanometer.
Tycos Fever Thermometers. *Tycos* Urinary Glassware.

Each the Standard of its kind

Produced in a factory where Quality is the watchword of the skilled workmen employed.

Guaranteed by a concern that has earned the confidence of the Medical Profession by years of experience in producing dependable products.



Write for Literature

Taylor Instrument Companies
Rochester, N. Y.

You take
NO CHANCES

whenever you specify J. & J. Casters in your furniture orders, because they are *right* in every way. Herewith we illustrate our No. 31, which is an *Ideal* Caster for use with Food Cars, Stretchers, etc.

Descriptive circular gladly sent on request.

JARVIS & JARVIS
Manufacturers of SUPERIOR Hospital Wheels and Casters
Southbridge, Mass.

AMERICAN FLOORING COMPANY, Inc.
101 PARK AVE., NEW YORK CITY

Plastic-Linoleum
and
Amflorite Composition Floors

Suitable for Public Buildings Hospitals, and Private Residences

Caution!

The efforts of the physician and surgeon—the watchful care of the nurses—the best endeavor of a hospital's management are often discounted by the unsanitary Refrigerators in use.

It is almost needless to remind those intrusted with a hospital's management that the Refrigerator is one of the most important items of its equipment. Nearly all foods pass through it—and while *in it* are preserved or deteriorate.

The MONROE
A Refrigerator of Supreme Quality

has been at the front for a quarter of a century because of the sanitary feature of its one-piece solid porcelain food compartments. They are clean, and *stay* clean. They do not crack, chip, or break. Every corner is rounded. They are the very enemies of dirt and bacteria.

99% Fine

The "Monroe" is a 99% Refrigerator. It approximates 99% in all of the four cardinal test points—not in three, two, or one of them, but in ALL! These four cardinal test points are:

(1) A scientifically correct system of dry air circulation.
(2) Coldness and dryness of air.
(3) Coldness—or low temperature.
(4) Small ice consumption—due to most efficient insulation—tight-fitting doors—and air-tight construction throughout.

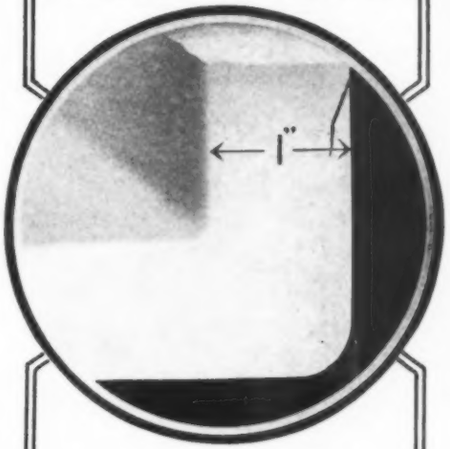
Temperatures

in the "Monroe" are the lowest. It may be operated by ice or by mechanical process. Its insulation is the very best, and the doors shut tight and stay shut by means of a patented automatic lock—thus preventing air leakage.

Our Book should be read before final Refrigerator decision is reached. It costs nothing to be well informed. We will gladly co-operate with you or your architect. Write for our catalog and Book on Refrigeration.

The Monroe Refrigerator Co.
319 Benson Street **Lockland, Ohio**

The famous "MONROE" one-piece solid porcelain



Leading Hospitals
Have Installed the "MONROE"

with the exclusive one-piece solid porcelain food compartments and are glad they did. Here are just a few who have the "MONROE"—

St. Luke's, New York
Bellevue, New York
Massachusetts General, Boston
Memorial Hospital, Harvard University, Cambridge, Mass.
Johns Hopkins, Baltimore
Isabelle McCosh Infirmary, Princeton College, Princeton, N. J.
Longview Hospital, Cincinnati, Ohio
St. Luke's, Chicago

The McKesson Apparatus

MODEL F—Hospital Unit No. 40

For Gas-Oxygen Anesthesia and Analgesia

Every hospital needs a McKesson Apparatus in its operating room and the maternity.

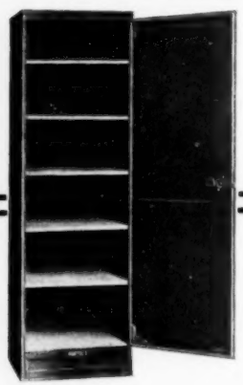
The **HOSPITAL UNIT No. 40** is equipped for any operation done in surgery or obstetrics. Other types and models are available for a more specialized service.

The **JUNIOR,** a portable model, is designed for analgesia in the lying-in room and for painful dressings in the patient's room.

All McKesson machines are automatic—they are regulated by the patient's breathing.

Write for our Model F and Junior Catalogs

Toledo Technical Appliance Company
TOLEDO, OHIO



TERRELL'S STEEL WARDROBES, CUPBOARDS AND SHELVING

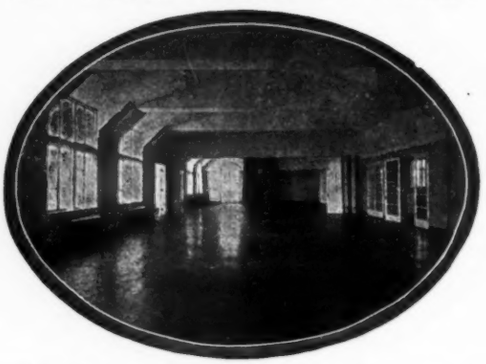
because of their practicability, durable construction and artistic design, are the cleanest, safest and most satisfactory receptacles for storing and protecting garments, records and other articles in the hospital or institution. The shelving is easily adjustable, and the interior arrangement can be altered at will.

These wardrobes and cupboards can be furnished in several styles, of varying capacity, and are finished in baked enamel—black, olive green and light gray. They are shipped knocked down or completely assembled.

White for descriptive folder of complete line before specifying equipment for your hospital.

TERRELL'S EQUIPMENT CO., Grand Rapids, Mich.

A Half Million Feet



Hospital floors installed during the past year and every foot is

SANITARY
FIREPROOF
QUIET
RESILIENT
ATTRACTIVE
GUARANTEED

Manufactured and installed by the

ATLAS FLOOR COMPANY
2401 Normal Avenue
CHICAGO

FLORIDA CITRUS EXCHANGE

In the practice of many eminent physicians it is held that grapefruit and oranges introduce into the system salts and organic acids which tone the blood and react favorably on the secretions of the body.

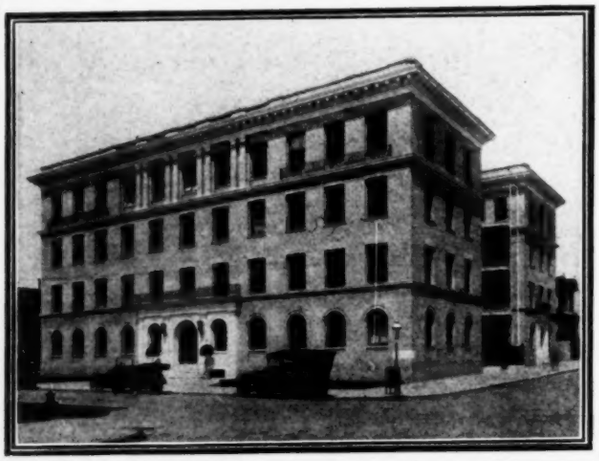
Salts and acids in citrus fruits chiefly are contained in the juices—the pulp has but little food or other value. The greater the juice content of oranges or grapefruit, whether used by persons in health or by invalids, the more benefit is derived from them.

Florida oranges and grapefruit are more juicy than any others grown. They attain their full measure of healthful contents only when tree-ripened. Sealdsweet oranges and grapefruit are the choicest grown in Florida, and always may be depended upon as tree-ripened. Be sure that the Sealdsweet trademark is on boxes and wrappers when you purchase. Buy by the box and save money.

ORANGES Sealdsweet GRAPEFRUIT

ORANGES Sealdsweet GRAPEFRUIT

LASTING INTERIORS



Mt. Zion Hospital, San Francisco, Cal. J. E. Kraft & Sons, Architects and Engineers. Plastered throughout with *Best Bros. Keene's Cement* in 1913.

It is fitting that the new San Francisco should take advantage of all that has proved best in building materials. The institution pictured above is an excellent example of how the city by the Golden Gate is building for the future.

Best Bros. Keene's Cement

"The Plaster That Stands Hard Knocks"

The one plaster for interior work that combines lasting service with advanced hospital requirements. When enameled, it may be sterilized by antiseptic washes. It's steam-proof and decay-proof.

Hospital folder sent on request

The Best Bros. Keene's Cement Co.

Established 1889

MEDICINE LODGE, KANSAS

NEW YORK **CHICAGO**

Nitrous Oxid-Oxygen

The Ideal Anesthetic

All up-to-date hospitals are now equipping themselves to use

THE SAFEST ANESTHETIC

Have You?

Write us for particulars

PURITAN MAID

Trade-Mark

THE OXYGEN GAS COMPANY OF MISSOURI

KANSAS CITY, MO.

Complete Gas Equipment

Printing *for* Hospitals

Our equipment is especially adapted to rapid and economical production of hospital and physicians' record cards, including history, diagnosis, and follow-up blanks, etc.

Annual *or* Special Reports

will demand attention if printed with the same clearness of type and illustrations as shown in this publication.

Your inquiries will be appreciated

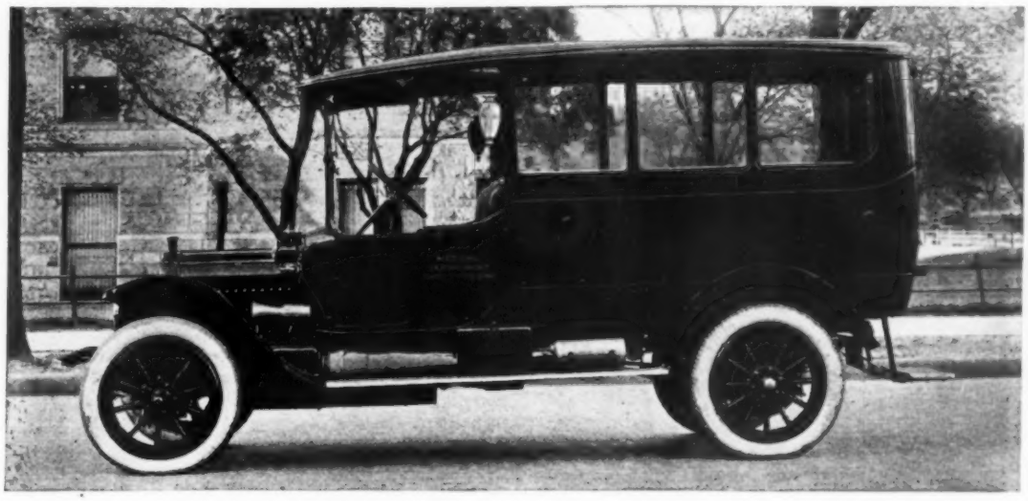
SAM'L F. MYERSON PRINTING CO.

Office and Main Plant **Third and Chestnut Sts.**

Little & Becker Branch **Ninth and Walnut Sts.**

ST. LOUIS

Largest Manufacturers of Commercial Motor Vehicles in America



White ¾-ton Ambulance owned by the Medical Department, U. S. Army

WHITE CHASSIS
for
Ambulance Service

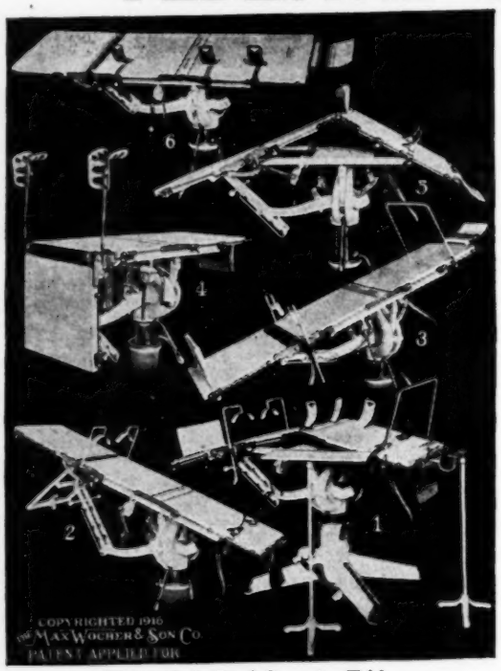
THE White Company has given particular attention to the construction of a special chassis for ambulance service. The spring suspension and perfect balance reduce to a minimum the possibility of swaying and shock to the injured patient. Ambulance bodies and equipment will be designed to meet any required need.

Let us send you information concerning White Ambulances in service. The experience of owners will interest you.

THE WHITE COMPANY
CLEVELAND

Awarded the ONLY GRAND PRIZE for Motor Trucks at the Panama-Pacific International Exposition, San Francisco

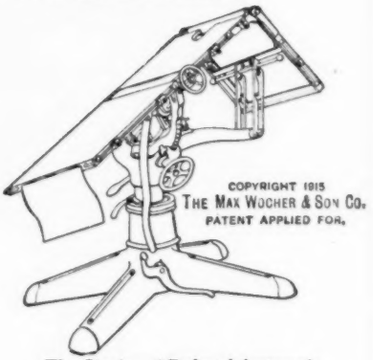
PEDESTAL OPERATING TABLES



The C. A. L. Reed Operating Table

Are rapidly replacing old styles

Eminent Surgeons and large Hospitals have ordered the tables illustrated herewith.



The Cincinnati Pedestal Automatic Operating Table

PRICES:

$165.00
195.00
250.00
450.00
500.00

THE MAX WOCHER & SON CO

Wocher-Murphy Simplex Operating Table, Patented Base

THE MAX WOCHER & SON CO.
Cincinnati, Ohio

PEERLESS FREEZERS

Are scientifically constructed on hygienic principles. They are specially designed for hospital, hotel and confectioner's use. Built strong and substantial, with up-to-the-minute features. Thousands in use by leading hospitals and hotels. They are made in all sizes up to 40 quarts, for operation by direct connected motor, by pulleys, fly wheel or crank. PEERLESS Freezers reproduce mechanically the old, unexcelled, hand "French Pot" method, giving to the cream an unsurpassed smoothness.

Ask your jobber or write us

The Peerless Freezer Co.

Winchendon, Mass.

Velvetile

Composition Flooring

Best for Hospitals and all buildings requiring floors that are

Sanitary
Fire-proof
Quiet
Comfortable
Resilient

Velvetile can be laid on either wood or concrete subfloor.

We offer a wide selection of time-tested colors that do not fade.

American Magnesia Products Co.
12th Place and Canal Street
CHICAGO

The
BUTLER BACK REST
(Patented)

The most comfortable, serviceable, and satisfactory head and back rest on the market—and by far the lowest in price.

May be used under or over the mattress, and may be adjusted to four different angles. Made of cold rolled steel, with detachable heavy canvas back.

Used and recommended by hospitals everywhere.

PRICE, $2.00 complete. Write your Supply House

THE BUTLER BACK REST CO.
SCHENECTADY, NEW YORK

HAND-MADE SEAMED GLOVES

THE STANLEY or Hopkins Seamed Gloves are made of pure para gum. Made in two weights, medium and heavy, sizes 6 to 10, no half sizes. Extra large sizes made to order. Every pair of these Gloves bear our patch and trade mark.

STANLEY SUPPLY CO.
118-120 East 25th Street NEW YORK

DUPLEX SAFETY FIRST

For hospital or sick room use, none but the safest pin should be considered.

Don't experiment—we have done that for you, and know Stewart's Duplex insures safety, while other inferior brands mean trouble and annoyance.

Accepted as Standard by National Hospital Bureau New York

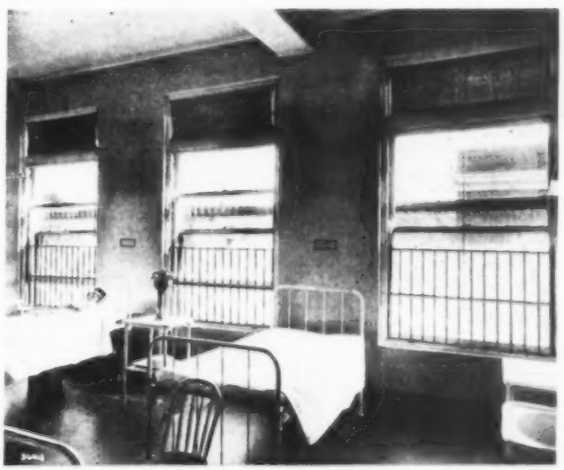
STEWART'S DUPLEX SAFETY PINS
TRADE MARK REGISTERED
"CONSAPICO"

Sample card and price list mailed upon request

Double head allows closing from either side and prevents point from passing through and missing fastening. Heavy selected wire, electroplated, absolutely rustless.

Packed 5 gross to attractive sanitary box with special hospital labels.

CONSOLIDATED SAFETY PIN CO.
BLOOMFIELD, N. J.



Death or Serious Injury

to a patient, who in fever or otherwise falls or jumps from an open window, is something that is constantly occurring in hospitals in different parts of the country.

Danger of such accidents is constantly present in every hospital.

Do not wait until you have an accident. Take the precaution now to eliminate this danger for all time by equipping the windows of your hospital with

The neat "SECURITY" inside steel WINDOW GUARDS
Detachable—Simple—Sanitary

the only practical and at the same time thoroughly acceptable form of window protection for hospitals.

Write for full particulars and prices, giving the probable number of windows to be protected, as price depends on quantity ordered.

SECURITY WINDOW GUARD CO.
30E. Randolph Street Chicago, Ill.

YOUR EQUIPMENT NOT COMPLETE

without

LANE SANITARY CANVAS TRUCKS

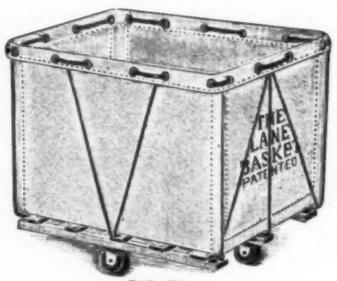


FIG. 52

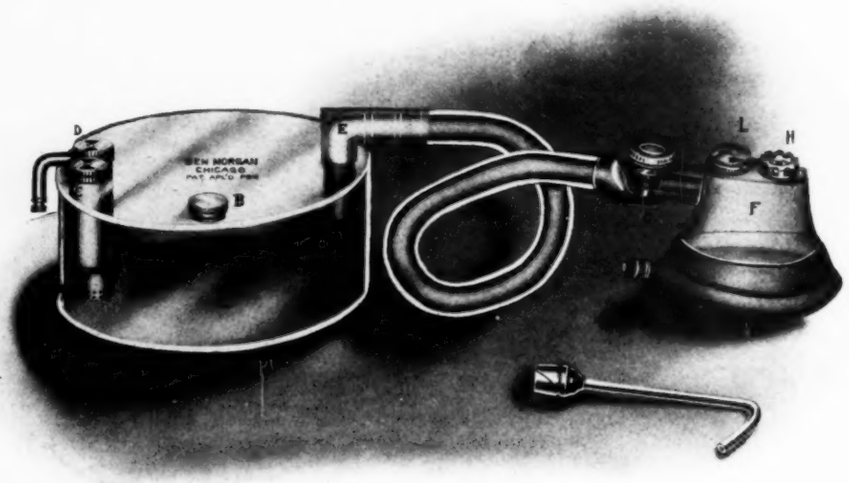
Frame galvanized. Body detachable for cleansing.
Light and long-lived.

Manufactured by

W. T. LANE & BROTHER Poughkeepsie, N. Y.

The Morgan Ether Vapor Apparatus

Permits of a gradual and even induction of anesthesia. No excitement stage. Uniform maintenance of any desired degree of anesthesia. Extremely economical. One Anesthetist states that one hundred anesthesias effected a saving of ether large enough to pay for the apparatus.



Patient cannot be deluged with an excess of ether. Perfect control of air mixture. Patient's respiration is a automatic check on the volume of ether vapor inhaled. Unobstructed access to all signs of response in the patient. Continuous one-way flow of ether vapor: hence normal conversion of oxygen in the blood. Consumes less than one-half the quantity of ether used in the drop method. No waste—only what is inhaled by the patient is expended. Obviates the use and expense of gauze, masks and anointments.

V. MUELLER & CO. Distributors 1779 Ogden Ave., CHICAGO, ILL.

Grueby NON-SLIP Impervious FLINT Tiles for FLOORS

Safe. Sanitary. Silent. Indestructible.

FORSYTH DENTAL INFIRMARY
Edward T. P. Graham, Architect

This altogether unusual benefaction is dedicated to the free care of teeth for Boston children.

Grueby Non-slip Impervious Flint Tiles in corridors, halls, etc.

Walls and Floors in children's waiting room in Grueby Dull Finish Tiles.

The Forsyth Coat of Arms in Grueby Opus Sectile.

Visitors are welcome.

Ask authorities how they are pleased with Grueby installations.

Samples, Booklet, Specification Blanks free on request

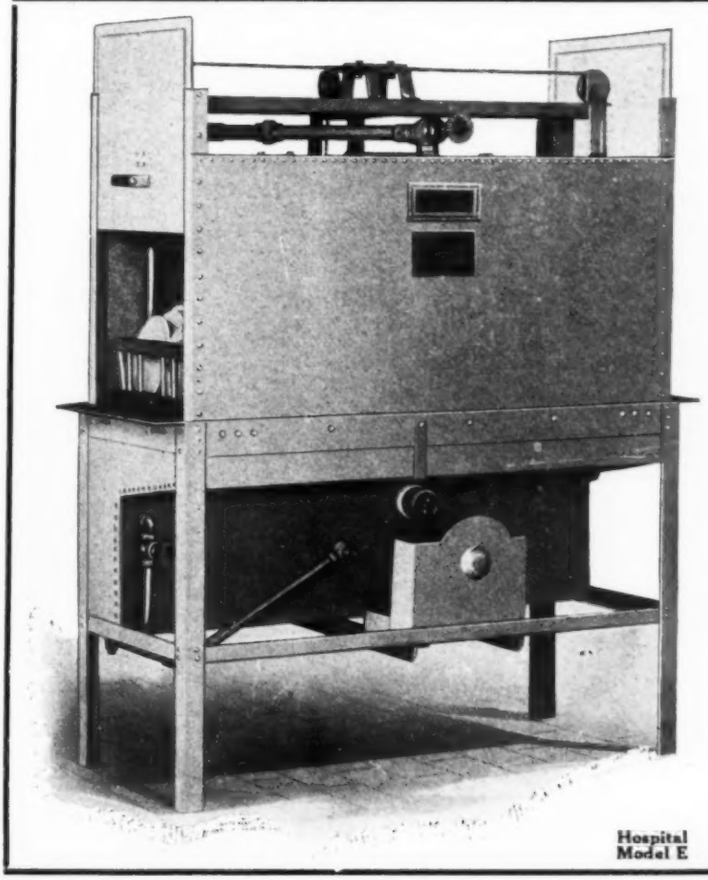
GRUEBY FAIENCE AND TILE CO.
BOSTON, MASSACHUSETTS
CHICAGO NEW YORK LOS ANGELES

Chicago's Finest Hotel

THE register of Hotel La Salle has been called "The Nation's Autograph Album." It is an interesting list of *representative Americans*. This high-class patronage was built on *thoroughness* in service. It includes careful, personal attention, finest cuisine and comfortable surroundings. Central location. Moderate prices.

Hotel La Salle

La Salle at Madison Street
CHICAGO



Hospital Model E

CRESCENT DISH WASHER

Noiseless—Rapid—Thorough
Easy to Operate

Dishes are washed in torrents of soap suds—rinsed and sterilized in clean, boiling water, which automatically dries them. All without being touched by hand.

Quickly pays for itself by reason of the saving of dishes, the elimination of dish towels, and the saving of time and labor.

The Crescent is the result of twenty years' experience in building dish washers.

Crescent is made in several sizes and two types, and is used in leading hospitals and other institutions.

Send for illustrated folder. Learn all about it without obligation.

BROMLEY-MERSELES MFG. CO.
NCORPORATED

CHICAGO
215 W. Superior St.

NEW YORK
1328 Broadway

THE OFFICERS AND DIRECTORS

OF

THE FRANK S. BETZ COMPANY

TAKE PLEASURE IN ANNOUNCING
THE ELECTION AS PRESIDENT OF

MR. LOUIS R. CURTIS

formerly Superintendent and Secretary of St. Luke's Hospital, Chicago

MR. FRANK S. BETZ, the retiring president, continues with the Company as Chairman of the Board of Directors

FRANK S. BETZ COMPANY Hammond, Indiana

"American Beauty"
ELECTRIC HEATING DEVICES
ARE
Standard Equipment
IN
Many Hospitals and Sanitariums

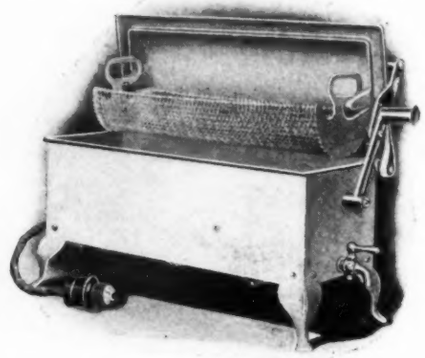
Electric

Laundry Irons	Warming Pads
Water Urns	Sweating Blankets
Coffee Urns	Sterilizers
Griddles	Food Warmers
Air Heaters	Plate Warmers

Write for prices and discounts

American Electrical Heater Co.
DETROIT, U. S. A.
Oldest and Largest Exclusive Makers

THE STERILIZER PARAMOUNT



ALL Aluminum
WEt and Dry Sterilization
CANnot *Burn Out*
GUARANTEEd for *Five Years*

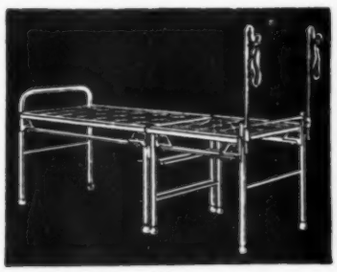
Prices

Dentist's	10″ x 4 ″ x 3″ . . .	$22.50
Specialist's	15″ x 5 ″ x 4″ . . .	27.50
Physician's	16″ x 6¾″ x 5″ . . .	35.00

STANDARD MEDICAL SUPPLY CO.
"Where Service Originates"
1006 West Lake Street Minneapolis, Minn.

STEEL
Hospital Furniture and Bedsteads
OF
Distinctive Character and Quality

Originators of Flush Joint Construction for Hospital Equipment, eliminating bulky castings and crevices which collect dust and germs.



No. 75—Obstetric Bed

No. 27—Bassinet

Catalogue and discount on application

RICHARDSON, WRIGHT & CO.

Manufacturers of
Steel Hospital Furniture and Bedsteads
Mattresses and Pillows

65 Beverly Street **BOSTON, MASS.**

CREASEY ICE BREAKER

You Can Save the Time, Nerves, and Energy of Your Nurses for Better Work

IF nurses are compelled to break ice by hand in the wards for ice-bags and similar purposes, time and temper are being unnecessarily frittered away. A Creasey Ice Breaker will do the work more quickly, neatly, and economically, without making a muss, and without waste of ice. Besides the small hand-size illustrated, we manufacture thirteen other sizes, in all capacities up to power-driven machines breaking fifty tons per hour. Some of these will meet your requirements for freezing ice cream, or if you use much broken ice for cooling food and drinks, etc.

Ask for the "Creasey Ice Users' Handbook," and for references to machines in your neighborhood

JOS. S. LOVERING WHARTON

MANUFACTURER

3112 North 17th Street **PHILADELPHIA, PA.**

A DOOR COMBINING NATURE'S GRAIN WITH STEEL'S PERMANENCY

If you can afford Dahlstrom Doors and Trim, your buildings will be safest, your interiors most attractive.

Safest, because Dahlstrom Quality means the most perfect, high-grade hollow metal products that it is possible to produce—superior construction, unequaled workmanship and finish, dependable service, safety from fire, and the finishing touch in the fireproofing of your building. Dahlstrom Products are everlasting, and more economical than the lower-priced substitutes.

Most Attractive, because Dahlstrom finish has not been equaled, and the grained work is a counterpart of Nature's grain, serving the esthetic features of the fine building with equal facility.

Write for instructive data on Hollow Mental Construction

DAHLSTROM METALLIC DOOR COMPANY

Executive Office and Plant, 12 Blackstone Avenue, JAMESTOWN, N. Y.

Branches and representatives in all principal cities

Concerning Medicinal Malt Preparations

THE manufacture of malt preparations for medicinal use is a highly specialized professional work, and is successfully accomplished only under the direction of competent chemists. While in some respects similar to the brewing of beer, there are vital differences both in the materials which enter into these products and the processes of manufacture.

ANHEUSER-BUSCH'S
Malt-Nutrine
TRADE MARK.

the food-tonic

is the recognized standard of medicinal malt preparations of its class. The materials used in its manufacture are specially selected and safeguarded. Only the choicest Barley-malt and Saazer hops are used, and the finished product contains all of the soluble substances of these two materials.

Malt Nutrine is a perfect malt preparation, and should not be confused with cheap dark beers, many of which are represented to be medicinal malt products.

For the hospital patient, physician, or nurse who is in need of a refreshing, appetizing, nourishing and mildly stimulating liquid food, ***Malt Nutrine*** is most serviceable. It is low in alcohol strength (less than 2%), but high in food value (14% of the solids extracted from malt and hops).

Pronounced by the U. S. Internal Revenue Department a PURE MALT PRODUCT, and not an Alcoholic Beverage

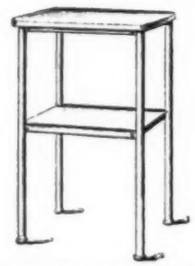
Sold by all druggists

ANHEUSER-BUSCH SAINT LOUIS

Visitors to St. Louis are cordially invited to inspect our plant

We Specialize on Institution Beds

We center every effort of our organization on the production of Metal Beds, Springs, and Hospital Furniture for general institutions. Will be pleased to quote prices on application.



No. A-98—Bedside Table

No. A-113—Bed Jack

No. A-79—Linen Conveyor

No. A-110—Brass Institution Bed

No. A-177—Institution Bed

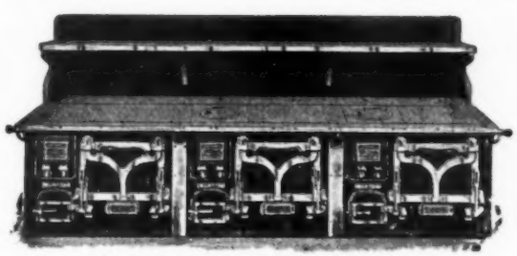
SMITH & DAVIS MANUFACTURING COMPANY

Manufacturers of High Grade Institution Beds and Hospital Furniture

Copy of Institution Catalogue will be furnished on request 1925 Locust Street, ST. LOUIS, MO.

QUALITY KITCHENS

COMPLETE FOR HOSPITALS



BURTON 12-FOOT FRENCH RANGE

"Burton" Equipment is built for heavy hospital duty.

"Burton" Kitchen Design means economy and efficiency.

Let "Burton" design and equip your kitchen for you.

Plans and estimates free of charge.

THE BURTON RANGE CO.

317 Walnut Street CINCINNATI, O.

Wear

"Knuklfit" Gloves

The Glove with the "HUMP"

A High-Grade Surgical Glove that Fits Perfectly under all Conditions and Positions

Perfect finger action and blood circulation.

No tension at finger joints.

No cramping of the hands.

Write or phone your Surgical Supply House for prices.

THE LINCOLN RUBBER COMPANY

AKRON, OHIO

Handy Drug Room Basket

Practical—Light—Strong

Takes the place of the unsanitary wicker basket

FILLS A LONG-FELT WANT

CONSTRUCTION

Compartments, 5½x5½ inches square.

Wire of ½-inch mesh, so woven that the smallest bottle or pill box will not drop through.

Making it a combination holder of all size bottles used in drug departments.

Easy grip handle. Basket is dipped in tin after construction, giving it a permanent, non-rusting finish.

Made in Three Sizes:

Sizes	Compartments	Length	Width	Height
No. 1	4	11 inches	11 inches	6 inches
No. 2	6	17 inches	11 inches	6 inches
No. 3	8	22 inches	11 inches	6 inches

Write Today for Prices

SHARP & SMITH, 155-157 N. Michigan Boulevard, Chicago

Established 1844 — Two Doors North of Randolph Street — Incorporated 1904

Makers, Importers and Exporters of

HIGH-GRADE SURGICAL INSTRUMENTS AND HOSPITAL SUPPLIES

FREE
For the Asking

MULLER ASBESTONE

The Floor That's Laid With a Guarantee

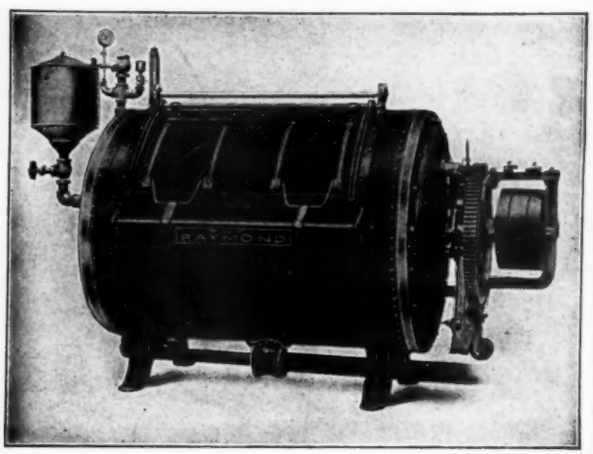
Does It Sound Good to You?

If so, why not make inquiry for information regarding this excellent sanitary and permanent flooring, which costs but a trifle more than wood.

All information gratis. We answer your questions in detail. Write at once. Address Asbestone

FRANKLYN R. MULLER & CO.
1 Madison Street
WAUKEGAN, ILL.

Sterilize and Disinfect
EVERYTHING
You Wash Before It Leaves
the Laundry Room



The highest grade of both dry and moist sterilization can be performed in this machine.

Write for Catalogue

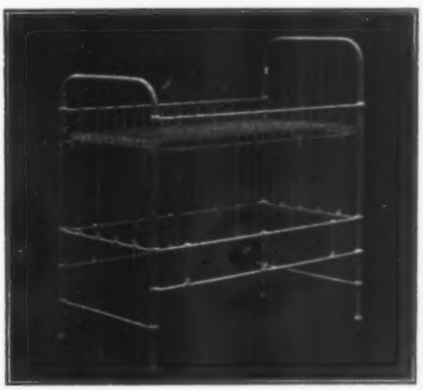
The Consolidated
Hospital Supply and Laundry Machinery Company
SAUGATUCK, CONN.

ADJUSTABLE BOTTOM IRON CRIB

No. 115—Patented

Strong woven wire fabric adjustable to four heights, 25 inches from floor, 29 inches from floor, 33 inches from floor, and 37 inches from floor. Smooth, rounded construction. Sides cast to ends and shipped set up as shown in photograph. Finish, High Gloss White Enamel.

Very convenient for examinations.



HOSPITAL BEDS AND BEDDING OF ALL KINDS
ASEPTIC STEEL FURNITURE

Catalogs sent upon request

FRANK A. HALL & SONS

Established 1828

25 West 45th Street **New York City**

"Worthington" Quality Equipment Wheel Chairs, Cripple's Machines, Sick Room Furniture

Johns Hopkins No. 321-B

Johns Hopkins Model No. 321-B Wheel Chair Features

Ball-bearing bicycle wheels. One-inch cushion rubber tires. All-metal running gear frames. Patented adjustable foot board.

Princeton Tricycle Model No. K-10 Cripple's Machine Features

Extra strong bicycle wheels. Tires 1¼-inch cushion to 1½-inch pneumatic. Patented levers, treadles, and seat, adjustable to any position or reach.

Catalogue

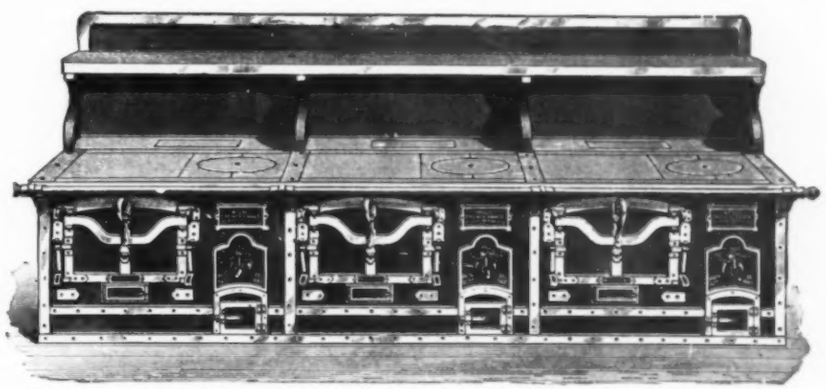
The Worthington Co.
Elyria, Ohio

Princeton No. K-10

The Era of Specialists

TODAY people are clamoring for specialists and specialization—expert opinion and experienced advice along particular lines—specialized products and services for a particular purpose.

That THE JOHN VAN RANGE CO. is recognized as the leading specialist in Hospital Kitchen Equipment is evidenced by the number of hospital kitchens "John Van Equipt" and the satisfactory results in every case.



VAN'S STEEL RANGES

Van's Steel Ranges are known the world over for their superiority of design, construction, and performance. They are built in the widest range of styles to satisfactorily fill the widest range of requirements. In fact, there is a John Van Steel Range for every purpose.

Send for catalogue describing these ranges, as well as our complete line of hospital kitchen equipment.

THE JOHN VAN RANGE CO.

Specialists in Hospital Kitchen Equipment

CINCINNATI, OHIO

The Columbus Laboratories

31 North State Street
CHICAGO, ILL.

Departments of Hygiene and Foods

EXAMINATION of water and milk supply, their purification and control.

EXAMINATION of all kinds of food for purity, quality, and wholesomeness.

SPECIAL TESTS on flour to determine its market and food value.

DIABETIC FORMULAS and balanced rations scientifically prepared as the case may require.

CONSULT US before selecting diabetic and other health breads.

Medical Department

SEND YOUR *pathologic specimens* to us for diagnosis.

WE CAN ASSURE you a valuable and prompt service.

WRITE FOR INSTRUCTIONS and fee table.

LET US MAKE complete examinations in *post-mortem* studies.

ASK FOR ADVICE in cases of *suspected poisoning* and toxicological work.

CONSULT US when you have *medico-legal cases.*

We make a specialty of examining drugs and medical preparations for purity, strength, and composition.

DR. J. A. WESENER **DR. ADOLPH GEHRMANN**

The "Mercy-Rest"

"A PERFECT REST"

The "MERCY-REST" gives the patient the position "that just fits."

The ***patient*** in bed or the ***nurse*** can work it—***"EASY."*** There are no "gears," "ratchets," or "dogs" in it to grind or trip.

The "MERCY-REST" is easily attached to brass or iron beds, is never in the way, and is always ready for use.

THE MERCY HEAD-REST COMPANY
ALANSON C. NOBLE, President
339 S. Wabash Avenue, CHICAGO, ILL.

FOR COMFORT'S SAKE

BAYONNE ROOF AND DECK CLOTH

PATIENTS must be safeguarded against discomfort. They must have every assurance of rest and quiet—every protection against the disturbances within and without the hospital walls. BAYONNE deadens the noise and bustle of the attendants. BAYONNE on the roof silences the din of the elements. BAYONNE on verandas and sleeping porches insures sanitation, for it can be sluiced with water—cleaned like cement.

BAYONNE is impervious to water, weather, and wear. Never corrodes, cracks, or curls. Cannot shrink or expand with changing temperature. Easiest to handle—most economical to apply.

Write for Sample Book "B," giving prices and laying instructions

JOHN BOYLE & COMPANY, Inc.
112-114 Duane Street 70-72 Reade Street
NEW YORK CITY
Branch House—202-204 Market Street, St. Louis
Complete Line of
Bleached Gauze, Bandage Muslin, Crash Toweling, Etc.

Dixie Fine Bedding for Hospitals

COMFORTABLE—CLEAN—WHOLESOME—REASONABLE

¶ The illustration shows our No-Tuft Compartment Hair Mattress, made without tufts, most filling where most wear comes, guaranteed five years against spreading. When desired equipped with removable rubber cloth sheeting. Easily renovated; can be thoroughly sterilized without renovating.

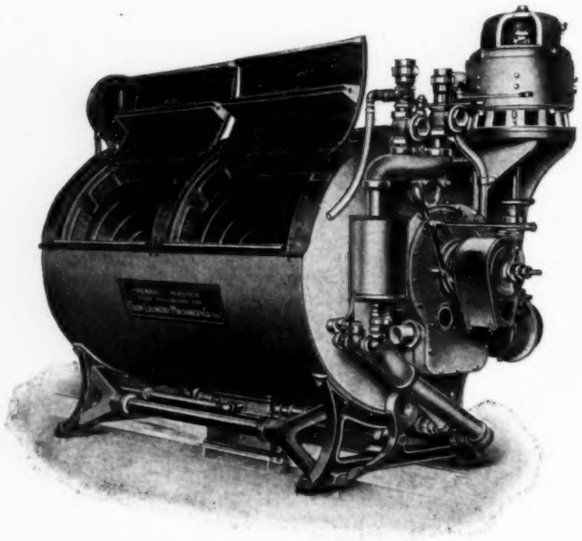
¶ Write for complete descriptive literature, and let our Contract Department assist in working out suitable bedding for your requirements.

¶ Address Contract Department, Chicago Office.

Branches
NEW YORK PITTSBURGH
CLEVELAND BUFFALO

DIXIE

Executive Office — MAIN PLANT
21st and S. Racine Avenue
CHICAGO



HENRICI

The Washer for the Modern Hospital

The Henrici Bronze Washer sterilizes the clothes, kills contagion, is absolutely sanitary.

Saves floor space, doing work of four ordinary washers.

Saves at least half the water, soap, supplies, power.

Saves linen, doubling its life.

Used in many leading hospitals.

Send for your copy of the new Henrici catalogue

TROY LAUNDRY MACHINERY CO., Ltd.

CHICAGO TROY NEW YORK CITY SAN FRANCISCO SEATTLE BOSTON

Do you receive our house organ, "Troy Topics"?

HOW much do you spend for absorbent cotton per year? It is probably a fair-sized item in your hospital. Write us your address on a postal and we will show you a saving.

The Maplewood Mills are the biggest in the country. We have built up a large hospital trade by reason of the fact that we meet the exacting requirements of surgeons and yet manufacture on so large a scale we can sell our cotton at a very low price.

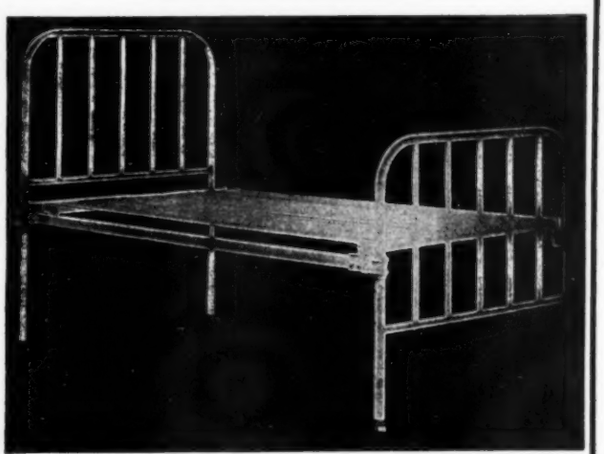
MAPLEWOOD MILLS

FALL RIVER, MASS.

Institution Beds

Having Malleable Iron Locks

Guaranteed Unbreakable



Quality First Consideration

Well constructed and finely finished. Made with either Woven Wire or Link Bottom as preferred. High grade casters

Send for Catalog and Prices

Union Wire Mattress Co.

1100-1120 Blackhawk Street, Chicago

CYPRESS "The Wood Eternal"

is probably the best wood on the market for trellises, arbors, and pergolas, because it is not necessary to tear down the vines to repaint the wood. Cypress may be left to "weather" into its fine natural effects, or it may be painted once every 91 years if desired.

Let our **"ALL-ROUND HELPS DEPARTMENT"** help YOU. Our entire resources are at your service with Reliable Counsel. We invite Correspondence with a Serious Purpose in it.

Southern Cypress Manufacturers' Association

1260 HIBERNIA BANK BUILDING, NEW ORLEANS, LA., *or*
1260 HEARD NAT'L BANK BUILDING, JACKSONVILLE, FLA.

INSIST ON CYPRESS AT YOUR LOCAL LUMBER DEALER'S. IF HE HASN'T IT, ***LET US KNOW IMMEDIATELY***

DIGESTS BACTERIAL PLAQUES

A New Principle in Mouth Hygiene

THE PROTEOLYTIC TOOTH PASTE
(Dental Mucin Digestant)

Formula by W. M. RUTHRAUFF, B.A., M.A.

The average mouth is the filthiest part of the human anatomy.

Twenty-five percent of the patients in your Hospital are there because of mouth infections.

Billings, Rosenow, Hartzell, the Mayos, the late J. B. Murphy, and others have conclusively shown that most of the chronic infections affecting the heart, kidneys, joints, the arterial and nervous systems are of mouth origin.

These infections begin with growths of bacteria upon the slimy albuminous films, which are constantly depositing upon the teeth.

The correction of these conditions necessitates the elimination of mouth infections.

The elimination of mouth infections is a constant struggle against the albuminous film that forms a culture media for bacteria.

Pepsodent removes these films by combining the digestive action of pepsin with an efficient polishing agent.

The use of pepsin is too well recognized in surgery to need further amplification.

Pepsodent is the only agent that will enable the patient to keep the teeth and mouth surgically clean.

Its use is indispensable in treating systemic diseases resulting from mouth infections.

It should be used as a prophylactic measure by nurses and others exposed to infectious diseases.

Hospital Superintendents should know this preparation. They will then demand its use by nurses and patients.

Samples, with formula and literature, sent on request of superintendent

THE Pepsodent COMPANY **1511 Ludington Bldg., Chicago**

SAM'L F. MYERSON PRINTING CO., ST. LOUIS

Washing does not harm AT-LAS-TA ENAMEL

Frequent washing only improves and intensifies its whiteness

AT-LAS-TA ENAMEL

produces a rich, smooth, white, lustrous finish upon interior and exterior walls and woodwork.

It flows freely under the brush and will not grain, lap or mark. It dries with a full, dust-free surface within six to eight hours, and hard in four or five days.

Frequent washing and long exposure only improves and intensifies its whiteness. *Under no conditions will it turn yellow or crack.*

AT-LAS-TA ENAMEL stands up under frequent washing, acid solutions, gritty washing powders, alkali soaps, acid fumes, live steam and constant wear better and longer than any other enamel made. Not just our claim, but a fact which we can and are only too willing to prove to you.

To do this permit us to send you a trial can so that you can apply this enamel to some surface, wall or woodwork where it will receive the same wear and be subject to the same conditions as the enamel you are now using.

Making this comparative test has proven worth while to every hospital in which it has been made. Because it will show you a better and more economical enamel, we know the test will prove worth while to you.

Likewise a test of our varnishes and wall paint.

SEND FOR OUR

Hospital "Trialette" Package of Tousey Varnishes, Enamel and Wall Paints

CONTAINS:

One can Tousey Spar Varnish

One can Tousey Flexible Floor Varnish

One can At-Las-Ta Enamel

One can Korealite Flat Wall Paint

Two good small brushes for applying the paints

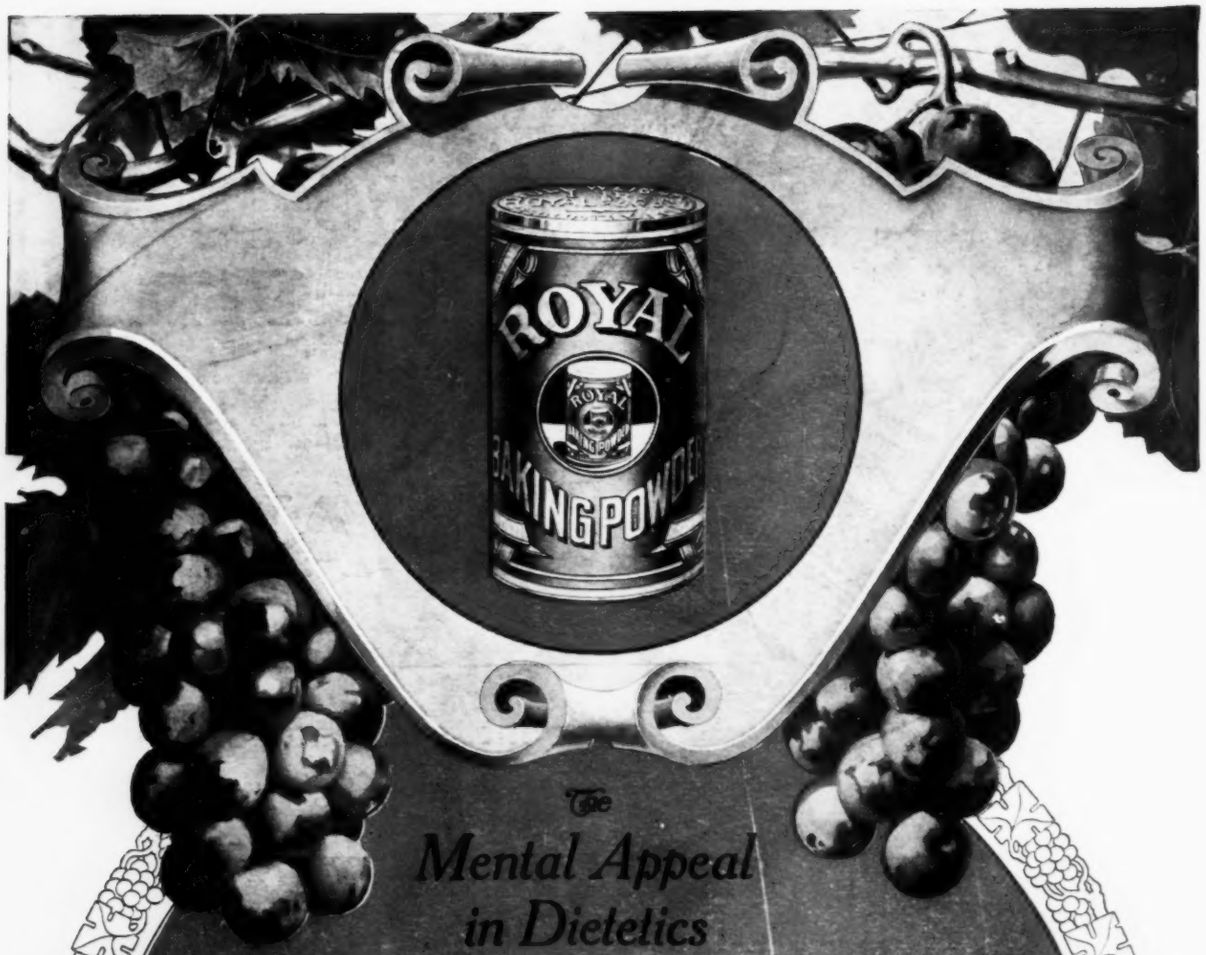
FREE AND EXPRESS PREPAID TO YOU

Send for our free Hospital "Trialette." Read the description to the left. Write

TOUSEY VARNISH COMPANY

Manufacturers of High-Grade Varnishes, Enamel and Wall Paint

520 W. 25th Street **CHICAGO**



The

Mental Appeal in Dietetics

The taste, flavor and appearance of food are more than mere esthetic considerations; they have an important influence on appetite and digestion. Moreover, it is essential that the food, through its variety, shall make an appeal to the mind. Through the use of a *pure* baking powder, many appetizing, nutritious and wholesome foods can be prepared from the most simple ingredients.

ROYAL
Baking Powder

will insure food tempting to the palate and possessing only healthful qualities. Royal Baking Powder contains no Alum or Phosphate of Lime. It is made from pure Cream of Tartar derived from ripe grapes, and is

Absolutely Pure